

Trade Liberalization, Social Policies and Health: A theoretical and empirical exploration

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ABSTRACT

This thesis theoretically and empirically explores how trade liberalization and social protection policies interact to influence health. It is conducted from a political economy of health perspective. A systematic review of the literature finds that trade liberalization is often conceptualized in public health work in problematic ways. Because the health impacts of trade liberalization are especially under-conceptualized in the context of labour markets, this thesis empirically explores the 2005 phase-out of the Multi-Fibre Arrangement (MFA). This phase-out abruptly liberalized the textile and clothing (T&C) sector and triggered substantial shifts in employment across a wide range countries. Data from 32 T&C reliant countries were analysed in reference to the pre- and post-MFA periods of 2000-2004 and 2005-2009. Fuzzy-set qualitative comparative analysis (fsQCA) was used to examine the association between: a) T&C employment changes, b) countries' level of labour market and welfare state protections, and c) changes in adult female and infant mortality rates. FsQCA is a cross-case method which enables logical statements to be made about the combinations of causal conditions that are sufficient for an outcome. Process tracing was used to further investigate these fsQCA results through in-depth case work. Findings suggest that the worsening of adult female mortality rates is related to T&C workers' lack of social protection in the context of trade liberalization. Overall, it is found that social protection is often inaccessible to the type of workers who may be the most vulnerable to processes of liberalization, and that many workers are particularly vulnerable due to the structure of social protection policies. Social protection policies can therefore both moderate pathways to health and influence the type of health-related pathways resulting from trade liberalizing policies. This work contributes to our understanding of the complex pathways between trade liberalization and health and sets the stage for further investigations.

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LIST OF ACRONYMS

ASSIA	Applied Social Science Index and Abstracts
AOA	Agreement on Agriculture
AGOA	Africa Growth and Opportunity Act
CSDOH	Commission on the Social Determinants of Health
DALE	Disability-Adjusted Life Expectancy
EBA	Everything but Arms
EMCONET	Employment Conditions Knowledge Network
EPF	The Employees' Provident Fund
EPZ	Export Processing Zone
ETF	Employees' Trust Fund
HALE	Health-Adjusted Life Expectancy
HDI	Human Development Index
ILO	International Labor Organization
ITS	Interrupted Time Series Analysis
IMF	International Monetary Fund
IMR	Infant Mortality Rates
FDI	Foreign Direct Investment
fsQCA	Fuzzy-set Qualitative Comparative Analysis
FTZ	Free Trade Zone
GATT	General Agreement on Tariffs and Trade
GATS	General Agreement on Trade in Services
GDP	Gross Domestic Product
GKN	Globalization Knowledge Network
GINI	Gross National Income
PGP	Global Public Good
GSP	General System of Preferences
LTA	Long Term Agreement Regarding International Trade in Cotton Textiles
MFA	Multi-Fibre Arrangement
NBER	National Bureau of Economic Research
OECD	Organization for Economic Co-operation and Development
PRSPs	Poverty Reduction Strategy Papers
RO	Research Objective
RQ	Research Question

SAPs	Structural Adjustment Policies
SDOH	Social Determinants of Health
SPI	Social Protection Index
SPS	Agreement on Sanitary and Phytosanitary Measures
STA	Short Term Arrangement Regarding International Trade in Cotton
T&C	Textile and Clothing
TBT	Agreement on Technical Barriers to Trade
TNC	Transnational Corporation
TPP	Trans-Pacific Partnership Agreement
TRIMS	The Agreement on Trade Related Investment Measures
TRIPS	Trade-Related Intellectual Property Rights Agreement
UDHR	Universal Declaration of Human Rights
UN	United Nations
UNIDO	United Nations Industrial Development Organization
WOK	Web of Knowledge
WHO	World Health Organization
WTO	World Trade Organization

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AUTHOR'S DECLARATION

I declare that, except where explicit reference is made to the contribution of others, this thesis is the result of my own original research and has not been submitted for any other degree at the University of York or any other institution.

CHAPTER 1 INTRODUCTION TO THE THESIS

1.1 Background

The health impacts of trade liberalization have begun to receive more attention in contemporary public health scholarship. However, this research is largely focused on the direct impacts of healthcare privatization, changing dietary patterns, tobacco use, alcohol consumption, and access to medicines. Receiving relatively little consideration are the impacts of trade liberalization on the social determinants of health (Blouin et al., 2009).

Generally speaking, the social determinants of health (SDOH) constitute the resources by which people can control the circumstances of their life. They include things like income, education and employment. Encompassing the reduction of tariffs, quotas, and other barriers to trade, trade liberalization can directly affect the distribution of these and other important SDOH (Blouin et al., 2009).

However, social policies also contribute to the resources available to people, directly through transfers and services, and indirectly through policies which affect people's opportunities to generate resources in the market (Lundberg, 2008). Therefore, the extent to which trade liberalization impacts SDOH and health will depend not just on the characteristics of trade policies but also on the characteristics of states' social policies.

A growing literature of comparative social epidemiological studies almost uniformly demonstrates that health outcomes vary significantly across different welfare state arrangements. The '*welfare state*' is a term often used in public health as shorthand to describe the characteristics of a state's social policy (Bambra & Eikemo, 2009). However, as Navarro and Muntaner (2004) point out, these studies often assume that countries have complete control over the decisions that impact broad determinants of health, such as levels of employment and income inequality. Such research ignores the role of trade policy in limiting countries' policy space surrounding economic, political and social decisions.

While a number of studies have explored the health impacts of trade liberalization conceptually, few have empirically linked liberalizing processes to determinants of health and health outcomes. Furthermore, since the effects of globalizing processes like trade liberalization are extremely context dependent, it has

been suggested that public health research should now move to studying the pathways between these macro-level processes and health via reference to case-specific contexts (Doyal, 2005).

1.1.1 Research Objectives and Questions:

With the above considerations in mind the first research objective of this work (RO1) is as follows:

Research Objective 1 (RO1): To identify how trade liberalization and social policy interact to influence health and its social determinants.

Towards meeting this objective an initial research question is:

Research Question 1 (RQ1): How do researchers theorize the pathways and mechanisms mediating the trade liberalization and health relationship?

While the first research objective of this thesis relates to understanding the health impacts of trade liberalization more broadly, the second and final research objective of this thesis (RO2) relates to a specific empirical examination of how trade liberalization interacts with social policy to influence health. It is as follows:

Research Objective 2 (RO2): To investigate and analyse how the phase-out of the Multi-Fibre Arrangement impacted health in countries reliant on the textile and clothing sector for employment.

The research questions associated with this objective are:

Research Question 2 (RQ2): How did health outcomes change after the phase-out of the Multi-Fibre Arrangement in countries reliant on the textile and clothing sector for employment?

Research Question 3 (RQ3): What are the potential causal mechanisms responsible for these changes?

This empirical work and the overall research design of the thesis will be described in greater detail later in this chapter.

1.2 Methodology

1.2.1 Political Economy of Health Perspective

This thesis is conducted from a political economy of health perspective (Bambra, 2011; Birn, Pillay, & Holtz, 2009; Nancy Krieger, 2011). As such it crosses both social epidemiological and sociological boundaries (Beckfield & Krieger, 2009; Muntaner et al., 2011). A political economy of health approach regards economic, social and political structures as the ultimate determinants of health.

A political economy of health approach can incorporate biomedical and behavioural models of health by recognizing the importance of health care services and lifestyle/behavioural factors, such as those related to diet, smoking and alcohol consumption (Birn et al., 2009). Much of the work which investigates the health impact of trade policy uses a political economy approach in this way, for example by drawing attention to the role of political actors and processes in facilitating the spread of unhealthy diets, people's consumption of tobacco and alcohol, and the privatization of health systems.

A political economy of health approach can also be used to explain how social determinants of health come to shape health distributions. To date there is no universally agreed definition of what the SDOH concept actually encompasses, however reference is commonly drawn to the work of the World Health Organization's (WHO) Commission on the Social Determinants of Health (CSDOH). Here attention is focused on the conditions under which people live and work (CSDOH, 2008). That there is no universally accepted definition of SDOH is not necessarily a problem since public health professionals may be conceptualizing these determinants in ways which are useful for the populations they seek to consider and the problems they seek to address. Nonetheless, it is important to recognize the broader implications of how we discuss and conceptualize SDOH (Raphael, 2011).

Some researchers conceptualize the social determinants of health in ways that overlap with biomedical and behavioural models of health by incorporating the health care sector and lifestyle factors such as smoking and dietary considerations, into the concept. While recognizing the health importance of these conditions, this thesis draws on the sociological construct of *fundamental determinants of health* to

set aside these factors which are more biomedical and behavioural in nature. This is done in order to achieve analytical clarity and also to recognize a distinction in health determinants which takes us beyond descriptive accounts by assigning a higher degree of priority to addressing certain health determining factors over others.

The fundamental determinants of health are perhaps best understood by contrasting them with what researchers Link and Phelan (1995) describe as ‘contextualized risk factors’. Whereas the latter are seen to explain “how people come to be exposed to individually-based risk factors such as poor diet, cholesterol, lack of exercise, or high blood pressure” (p. 81), the fundamental determinants of health are broadly conceptualized as relating to peoples’ social position and thereby include factors like “money, knowledge, power, prestige, and the kinds of interpersonal resources embodied in the concepts of social support and social networks” (p. 87).

An important implication of this distinction is that even if we change the contexts within which people are exposed to individually based risk factors, the fundamental determinants of health will continue to shape population health profiles. This is because factors related to peoples’ social position are associated with multiple risk factors as well as multiple health outcomes; and as Link and Phelan (1995) note, we live in a dynamic world system whereby new diseases and risk factors are always emerging. As such, those with the most resources will always be best positioned to achieve better health.

The financing of health care can itself be conceived of as a fundamental determinant of health, as lack of access to publicly funded care can cause households to spend significant amounts of money on health services. Lack of access to care can also cause loss of earnings in cases of illness (Labonté & Schrecker, 2007). However, in using a political economy approach, this thesis is predominately focused on how economic and political processes impact determinants of health beyond medical care and the contextualization of risk factors. Thus the use of SDOH as a concept in the remainder of the thesis refers to this focus.

Emphasis is placed on these fundamental determinants of health since, as previously noted, work which focuses on the relationship between trade and health has paid them less attention and because, as the fundamental cause theory makes

clear, a focus on these types of causes will be the most effective in facilitating lasting health improvements. With this focus, this work is aligned with *population health perspectives* which recognize that while good medical care is vital, unless political, economic and social drivers of health are addressed, people's opportunities for well-being are limited (although often population health approaches are also concerned with contextualized risk factors) (Jamrozik & Hobbs, 2004; Kindig & Stoddart, 2003; Roos, Brownwell, & Menec, 2006).

The implications of this methodological focus are found in the decisions made in relation to the research design of this thesis, which are detailed in the following section.

1.2.2 Research Design

An important aspect of the research design of this thesis is that the objectives, research questions and methods were not fixed from the beginning, but rather emerged and evolved as the work progressed. Two major research components characterize the thesis.

In seeking to answer the initial research objective and question (RO1 and RQ1), the first component of this thesis is a systematic literature review which aims to understand the pathways characterizing the trade liberalization and health relationship. For reasons outlined above, this review pays particular attention to SDOH pathways.

Findings from the literature review informed the second component of this thesis which is a case study of how trade liberalization and social protection policies interact to influence distributions of health. The 'case' in this study is the 2005 phase-out of the Multi-Fibre Arrangement (MFA) which after nearly 50 years of protection abruptly liberalized the textile and clothing sector. The units of analysis are the many low- and middle-income countries for which the clothing and textile industry is an important source of employment, especially for women. Since systems of social protection in these countries are highly diverse, analysing how important determinants of health and health outcomes changed in these countries after the MFA phase-out can help to develop our understanding of how trade liberalization and social policies interact to influence health (RO1 and RO2).

1.2.3 Analytical Frameworks and Methods

Two analytical frameworks are associated with this thesis. The first is an adapted ecosocial framework which delineates the links between trade liberalization and health. This framework is presented in Chapter 3 and was developed as a way of organizing the findings of the literature review. A main feature of this framework is the recognition that the pathways between trade liberalization and health overlap and interact across various socio-political, historical and spatiotemporal considerations.

The second analytical framework is based on work undertaken by the Employment Conditions Knowledge Network (EMCONET) of the World Health Organization's Commission on the Social Determinants of Health (Benach, Muntaner, & Santana, 2007). This framework is first described in Chapter 2 and is found to offer the most comprehensive outline of pathways to health in the context of labour markets. The framework is conceptually separated at a micro- and macro-level. Considered at the micro-level are a number of behavioral, psychosocial, and physiopathological pathways. At this level, four main categories of risk exposure (physical, chemical, ergonomic, and psychosocial) are seen to be mediated by social mechanisms and influenced by six different types of employment conditions (full employment, unemployment, precarious employment, informal employment, child labour, and slavery & bonded labour). At the macro-level, a main consideration is the role of labour market and welfare state policies in shaping these more micro-level considerations.

Together these two frameworks helped to guide decisions about the methods used in the case-study component of this thesis: fuzzy-set qualitative comparative analysis (fsQCA) and process tracing. As will be made clearer in Chapter 5, fsQCA is a cross-case method which enables logical statements to be made about the conditions that are necessary and/or sufficient for an outcome. This method was chosen over the typical cross-case method utilized in macro-level public health work, logistical regression, since it is better able to consider the interactive effects of causal conditions (as captured in the adapted ecosocial framework) and how they may vary according to different macro-level contextual conditions (as laid out in the EMCONET framework [Benach et al., 2007]).

A main limitation of fsQCA however, is that like other cross-case methods, it identifies associations, not causation. It is for this reason that process tracing was

used to further investigate the fsQCA findings through in-depth case-study work of twelve countries. Since the EMCONET framework (Benach et al., 2007) identifies a comprehensive indication of the potential causal processes behind the fsQCA results, it is this framework that is used to guide and causally interpret these process tracing efforts.

1.3 Contributions to Knowledge

The relationship between trade and health is undeniably, enormously complex. Seeking to untangle these pathways is therefore an ambitious endeavour. The literature review undertaken in this thesis represents the first attempt at delineating the health impacts of trade liberalization through a systematic narrative synthesis. While focused on SDOH related pathways, this analysis exposes new considerations for the trade and health research agenda. Of primary importance are the various, and often problematic, ways in which trade liberalization is conceptualized and defined in public health work. Drawing on the field of development economics, this thesis provides a definition of trade liberalization which avoids such problems and can begin to move the agenda forward. Critically analysing the trade and health literature also exposes the utility of ecosocial theory, which is found to both capture the major features of the trade liberalization and health relationship and provide a useful means of advancing areas thus far under conceptualized.

In undertaking the case study of the MFA phase-out, this thesis applies an original and innovative method to analyze how trade and social policies interact to influence health: fuzzy-set qualitative analysis combined with process tracing methods. In doing so, it offers some of the first empirical evidence of how trade liberalization interacts with social policies in the context of labour markets to influence health. While these results are tentative in nature, they do offer an important consideration for both policy makers and researchers alike: that social protection is often inaccessible to the type of workers who may be the most vulnerable to processes of liberalization and that many workers are particularly vulnerable to processes of liberalization due to the structure of labour market and social protection policies.

1.4 Organization of Thesis

This thesis consists of 10 chapters which are conceptually organized into three parts. Following this introduction, the first part of this thesis is covered in Chapters 2 and 3. These chapters deal with the first research component of this thesis: the systematic literature review. While Chapter 2 describes the methods and results of the review, Chapter 3 critically discusses these findings and presents the aforementioned adapted ecosocial framework.

The second and third parts of this thesis are concerned with the second research component: the case study of the MFA phase-out. The second part consists of Chapters 4, 5, and 6 and deals with the cross-case component of this work. Chapter 4 will introduce the MFA phase-out and further consider the analytical value of the EMCONET framework (Benach et al., 2007). Chapter 5 will introduce fuzzy-set qualitative comparative analysis as the ideal cross-case method for investigating the health impacts of the MFA phase-out, and Chapter 6 will present the results of the fsQCA and a critical discussion of these findings.

The third and final part of this thesis deals with the within-case analysis of the MFA phase-out. It consists of Chapters 7, 8 and 9. Chapter 7 introduces process tracing as useful method for looking further into the fsQCA results. Chapter 8 presents the results of the in-depth case study work, and Chapter 9 critically discusses these findings. Finally, Chapter 10 will conclude with a consideration of the main results, strengths, and limitations of this thesis, as well as where we are left in terms of next steps for research.

INTRODUCTION TO PART 1

As mentioned in Chapter 1, this thesis is conceptually organized into three parts. The first part of this thesis is comprised of Chapters 2 and 3. These chapters concern the first research component of this thesis which is a systematic literature review of conceptual frameworks which link trade liberalization to health. Chapter 2 will detail the methods used in this review and explore the general findings of this work. Chapter 3 will then critically discuss these results in as far as they address the challenges in understanding the links between trade liberalization and health.

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

This chapter will present findings from a systematic literature review of conceptual frameworks which link trade liberalization to health. By identifying elements which link trade liberalization to health, conceptual frameworks offer the benefit of rendering manageable otherwise complex pathways. Conceptual frameworks also lend support in the construction of theories and models and can guide researchers' choice of methods and research designs (Vesely & Smith, 2008). Undertaking a narrative synthesis of frameworks can therefore help develop a consensus on what the pathways between trade liberalization and health are, highlight gaps in the literature, direct priorities for future research, and allow for the creation of a delimited number of frameworks from which to work, the value of which has been described by population health researcher, Barbara Starfield (2001):

"Common frameworks enhance the likelihood that the results of research studies can be interpreted in a policy framework. When studies use the same framework, difference in results will suggest the possible mediating or compounding role of previously unidentified factors that need to be considered in subsequent research" (p. 552).

This idea is paraphrased particularly well by Labonté and Togerson (2003) in relation to their narrative synthesis of globalization and health frameworks:

"[R]esearch (or research synthesis) using a smaller number of frameworks is more likely to generate findings that can be translated into policy 'so what's'? It is more likely to generate novel and important questions requiring new empirical answers. The absence of an analytical framework makes it more difficult to adjudicate the full range of positive and negative affects of globalization, and particularly trade liberalization, on health outcomes or health-determining contexts" (p. 4).

This chapter is divided into three main sections. Following this introduction, section two will provide the details and appropriateness of the methods used in this review. Here explicit processes of study identification, study selection, data extraction, critical appraisal and data synthesis will be detailed. In a preliminary synthesis of the findings, the third section of this chapter will explore the general

results of the literature included in this study. Chapter 3 will then critically discuss these results in as far as they address the challenges in understanding the links between trade liberalization and health. Drawing on the points raised in this discussion as well as social epidemiological theory, Chapter 3 will also present a new conceptual framework which both captures the major features of the trade liberalization and health relationship and provides a useful means of advancing areas thus far under conceptualized.

2.2 Methods:

Explicit details of the protocol and logic used to identify, select, critically appraise, and synthesize findings is outlined in the below sections. This makes clear the links between the details of included studies and conclusions drawn.

2.2.1 Inclusion Criteria

For literature to be included in this review, a clear analytical framework for conceptualizing pathways between trade liberalization and health must have been explicated.

2.2.2 Exclusion Criteria

Conceptual frameworks that were not available in English were not included in this review.

2.2.3 Searching for Studies

Locating articles that investigate the relationship between trade liberalization and health involved two primary strategies:

1. The Applied Social Science Index and Abstracts database (ASSIA) database, PAIS International database (CSA Illumina, Bethesda, Maryland; <http://www.csa.com>), Econlit (OvidSP, New York, New York, <http://www.ovid.com>), and the ISI Web of Knowledge (WOK) (CSA Illumina, Bethesda, Maryland; <http://www.csa.com>) were searched between December 12, 2010 and March 22, 2011.

The ASSIA database includes works published since 1987, the PAIS International database includes work published since 1972, the Econlit database includes work since 1969, and the WOK since 1990. These four databases were chosen for their expanse of literature related to economics,

social policy, and health.

Search parameters included the following keywords “analytical”, “framework”, “pathways” “linkages”, and “relationship”; in various combinations with descriptions of liberalization including “trade”, “globalization”, “globalisation”, “liberalisation”, “liberalization”, “global economy”, “global economics”, “transborder”; and health outcome descriptors such as, “health”, “well-being”, “living conditions”, “morbidity”, “mortality”, “poverty”, “infant mortality”, and “life-expectancy”.

2. Google Scholar was also utilized to locate articles. Search keywords mirrored those described above.

2.2.4 Selection of Studies

Literature identified through the above search strategies underwent a two stage selection process. In the first stage of the selection process, titles and abstracts were systematically scanned for their relevance to the topic. Studies which clearly did not meet the inclusion criteria were classified as irrelevant. Where a definite decision could not be made, the second stage of the selection process required that full reports be obtained for a detailed assessment of the study against the inclusion and exclusion criteria.

2.2.5 Preliminary Search and Refined Search Strategies

A preliminary search was undertaken in the ASSIA and PAIS databases to pilot the efficacy of the search terms and selection process against the inclusion and exclusion criteria. This led to a low recall of 158 articles. Studies which clearly did not meet the inclusion criteria were classified as irrelevant (n=99). Where a definite decision could not be made, the second stage of the selection process required that full reports be obtained for a detailed assessment of the study against the inclusion and exclusion criteria (n=59). Of these full reports only 6 were identified for inclusion in the review.

To further increase recall and precision, a refined search strategy was developed whereby reference lists of articles meeting the inclusion criteria were hand searched to identify additional frameworks. Furthermore, lists of potential frameworks were identified by using Google Scholar’s ‘cited by’ feature on frameworks identified for inclusion.

However, frameworks identified through these supplementary strategies with an exclusive focus on the health impacts of trade liberalization via reference to health services, tobacco, alcohol, medicines or food, were not included. While these factors are all important determinants of health, each of these areas already has a rich and extensive research environment. Moreover, this review is interested primarily in the understudied impacts of trade liberalization on the social (fundamental) determinants of health.

In the preliminary search, three main issues, or a combination thereof, arose which makes explicit the type of studies which are not included in this review. These issues also highlighted the need for a more explicit understanding of what a conceptual framework is. These issues and a more thorough explanation of what this review deems a conceptual framework are discussed below.

First, it quickly became apparent that much of the literature identified by this review discusses relationships between trade liberalization and a health determinant (e.g. poverty) without addressing any clear pathway from the determinant to health. In an article published by the International Monetary Fund (IMF), for example, authors Berg and Krueger (2002) discuss the relationships between trade liberalization, growth, and poverty (as income deprivation). It goes without say that poverty is a major determinant of health. However, because we must otherwise rely on other theoretical models of how and why being poor brings about health impacts, articles that do not explicitly discuss the health impacts of poverty are not included in this review.

It was also recognized that much of the identified literature discusses aspects of trade or globalization not specifically related to trade liberalization. This was likely to happen given the use of broad economic keywords in the search strategy. Arellano and Caner (2004) for example, focus on the poverty impacts of financial liberalization. While there are many important relationships and commonalities between trade liberalization, financial liberalization and other processes of globalization, this review sought to explore these issues from the singular perspective of trade liberalization. Moreover, any framework which relates trade liberalization to other aspects of globalization will be included in the review and expose such links.

Refining the search terms would have been one way to deal with these first two issues, excluding ‘poverty’ or ‘globalization’ from the search keywords might have increased the likelihood that identified frameworks were eligible for inclusion. However, because of the already low recall numbers, any potential loss of frameworks did not seem worth this risk.

Finally, much of the identified literature relates economic processes to health outcomes with little explanation of the pathways by which these relationships are produced and maintained. For example, Martens and colleagues (2010) use a globalization index to test hypothesized health impacts of various dimensions of globalization. While important for providing empirical evidence, analyses or models that fail to elucidate specific channels of interaction between trade liberalization dimensions and health, are not included in this review. This issue in turn, raised the question of what should be considered a conceptual framework.

2.2.6 Defining Conceptual Frameworks

Population health researchers Carpiano and Delay (2006) distinguish between conceptual frameworks, theories, and models in *A guide and glossary on postpositivist theory building*. These constructs are seen to operate along a continuum where their “scope decreases as logical connectedness and specificity increases” (see figure 1) (p. 565).

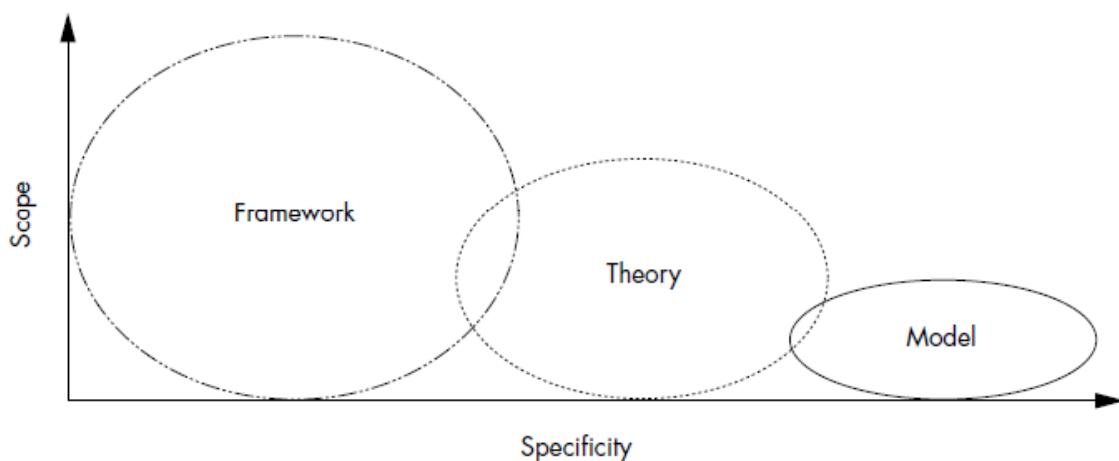


Figure 1 The continuum of frameworks, theories, and models (Carpiano & Daley 2006)

The authors argue that a “*conceptual framework* identifies a set of variables and the relations among them that are presumed to account for a set of phenomena” (p. 565 emphasis in original). Frameworks are thus meant to organize assumptions and act as a prerequisite for *theory*, which in turn “explicates a more dense and logically coherent set of relationships, including direction, hypotheses, as well as how variables may covary” (p. 565). Finally, the authors argue that models “make specific assumptions about a limited set of parameters and variables” (Carpiano & Daley, 2006, p. 565). It should be noted however, that this view of theory building has been questioned on the basis that “the birth of new theory is a much more chaotic process” (Vågerö, 2006, p. 573).

To make the differences between the three constructs more apparent, the authors present the following illustration in figure 2.

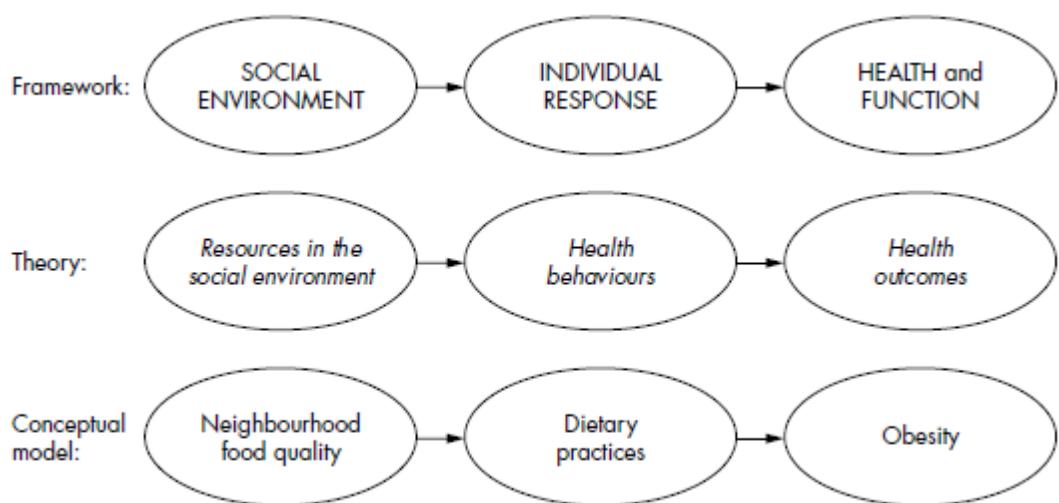


Figure 2 Example of the connection between a framework, a theory, and a conceptual model (Carpiano and Daley 2006)

Clarifying the differences between these three constructs is conceptually useful in some regards, but perhaps overly simplified. While the authors acknowledge some overlap between the three concepts (see figure 1), it seems plausible that even greater intersection may occur, when for instance, more is known about certain links than others. For example, authors might acknowledge the role of the social environment in influencing health behaviours very broadly, but then draw on more refined theory to explore the links between health behaviours and obesity in greater detail, resulting in relationship which is illustrated in figure 3. This seems

especially more likely when a greater number of contextual levels are considered in a largely nascent area, as in the case of trade liberalization and health. Therefore, for the purposes of this review, authors drawing on any of the three constructs in a way which delineates one or more pathway between trade liberalization and health will be included and for simplification purposes will be deemed a ‘framework’.

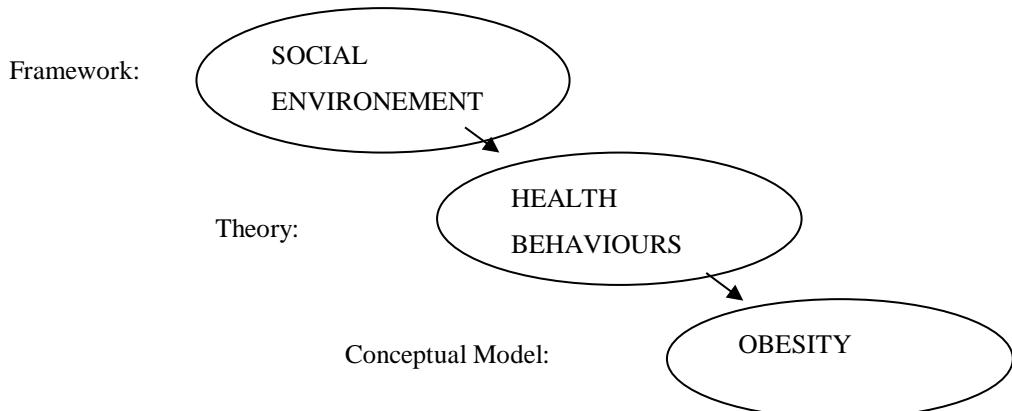


Figure 3 Example of the difficulty in distinguishing between frameworks, theories, and conceptual models

In order to help guide the decision of whether a framework should be included, this study adopted a broad definition from social science research which proposes that a conceptual framework can be understood as a tool for organizing a set of ideas and interrelationships in a way which maps out elements of larger social processes (Vesely & Smith, 2008). This conceptualization was then incorporated into the search strategy by asking the question ‘Does this author provide a clear, systematic structure, outlining possible pathways through which trade liberalization potentially impacts health?’

2.2.7 Data Extraction

Once studies were identified for inclusion, a process of ‘data extraction’ was undertaken. In order to answer the first research question of this thesis (RQ1), data was extracted from identified studies to answer the following questions.

1. How is trade liberalization understood in analytical frameworks relating trade to health?
2. How is health conceptualized in these frameworks?
3. How do researchers theorize the mechanisms and pathways mediating the liberalization and health relationship (RQ1)?

The first two of these questions were posed since the ways in which trade liberalization and health are understood can both conceal and illuminate pathways and mechanisms important for health.

In line with the first question, a main consideration of the data extraction process was determining how trade liberalization is understood by framework authors. In her influential book on poverty, Ruth Lister (2004) describes the differences between concepts, definitions, and measurements. Although some overlap is acknowledged, concepts are understood to operate at the general level, whereas definitions and measurements represent areas of respectively narrower focus. Lister notes that the three constructs are often conflated in work on poverty, despite their different purposes. She also notes that the constructs are highly contentious due to their material effects. However, by distinguishing between the three, Lister not only provides a more comprehensive account of poverty, but also helps to elucidate on what level controversies are based.

Given the highly complex and often contentious relationship between trade liberalization and health, this differentiation was found to be especially useful in determining how trade liberalization is understood across conceptual frameworks included in this review. Therefore, information on how authors conceptualized, defined and measured trade liberalization was noted for each framework. For the purposes of this review, trade liberalizing concepts were taken to be the broad meanings authors conceptualized as lying behind trade liberalizing processes, for example ‘market integration’ or ‘free trade’; as well as the larger contexts within which authors see these processes taking place, for example ‘globalization’ or ‘neoliberalism’. Definitions by contrast, were characterized as offering more specific explications of trade liberalizing processes (e.g. tariff reductions). And measurements, in turn, were understood as ways of operationalizing these defined processes.

In line with the second question of this review, the data extraction process was also concerned with how framework authors conceptualize health. This review characterized authors’ conceptualization of health based on whether overall health or health inequalities were explored; whether trade liberalization was related to specific health outcomes or health/health inequalities in general; and whether authors used a readily identifiable ‘frame’ of health, where the latter draws on work by Labonté

(2008) which highlights five readily identifiable frames of health: health as security, health as development, health as a global public good, health as a commodity, and health as a human right. These frames constitute the ways in which health is discussed in both global trade and global health discourses and thus has implications for how well frameworks are received and acted upon. These frames also have important implications for health equity. Therefore the implications of these frames should be taken into consideration if a comprehensive understanding of how trade liberalization impacts health is to be accepted by actors in the global arena with positive impacts on health equity.

The final element of the data extraction process focused on the third question of this review: how do researchers theorize the mechanisms and pathways mediating the liberalization and health relationship. In reviewing included frameworks, four contextual domains were readily identifiable within which trade liberalization was seen to impact health: flow of goods; agricultural and food trade; structural adjustment policies (SAPs) and Poverty Reduction Strategy Papers (PRSPs), and labour markets. Characterizing frameworks on this basis represented the broadest way of understanding how mechanisms and pathways were theorized.

2.2.8 Critical Appraisal and Narrative Synthesis

Studies were critically appraised on their ability to answer the three main questions of this review. It has been argued that narrative syntheses are the best way to describe and evaluate macro-level pathways to health (Labonté & Schrecker, 2006). The ability to explore and synthesize findings from frameworks included in this review was made possible by extracting and organizing the data collected into thematic categories that responded to the three questions characterizing this review, as identified above.

2.3 Results

In total, 41 studies were identified for inclusion in this review. Figure 4 below presents an overview of the study identification process. It should be noted that some of the frameworks included in this review were drawn upon more than once across different literature. This was most often the case with literature which drew on work of the World Health Organization's (WHO) Globalization Knowledge Network (GKN) and Commission on the Social Determinants of Health (CSDOH). Duplicate

frameworks however, were counted uniquely in the 41 identified studies, as different literature typically emphasized or deemphasized certain aspects of the same framework.

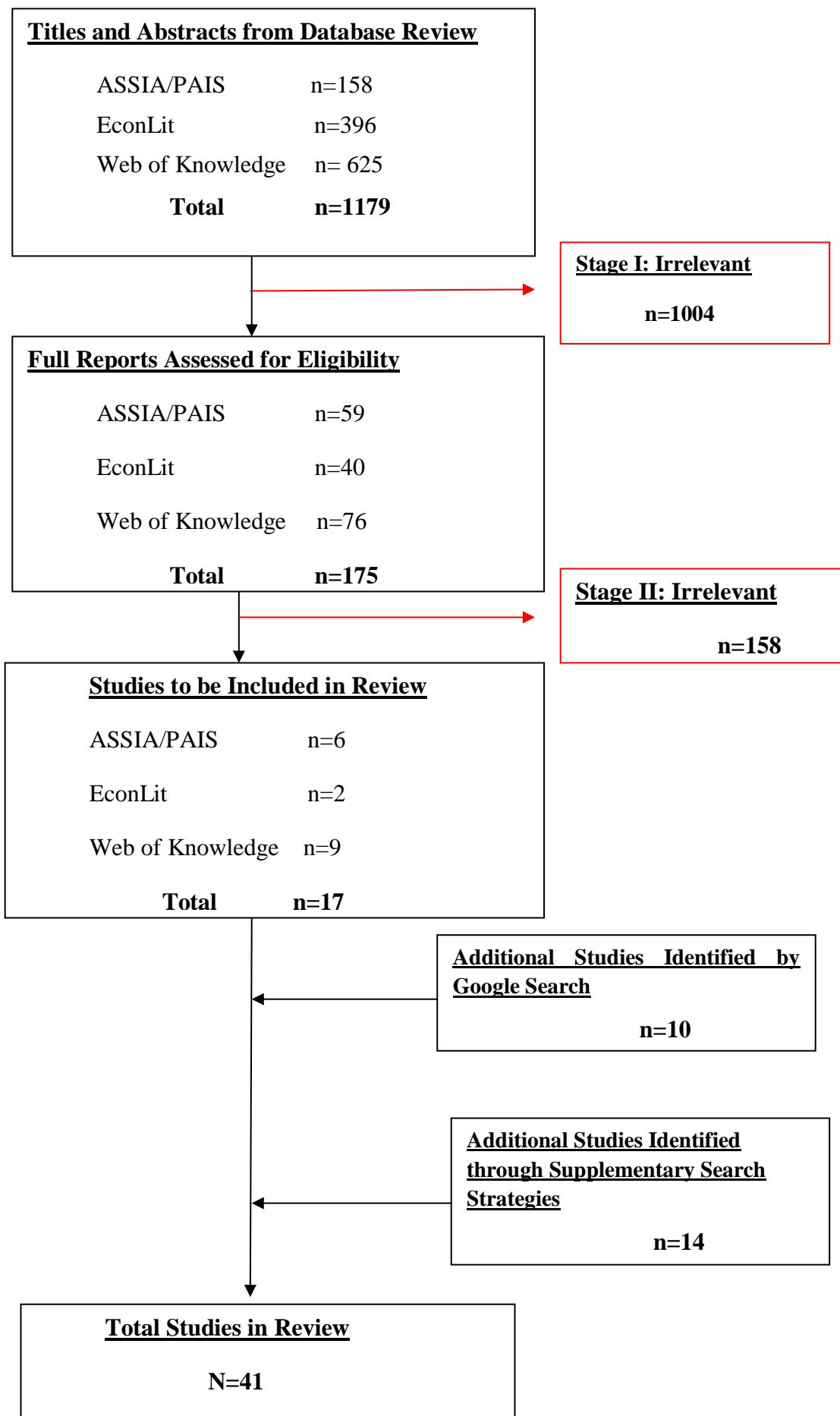


Figure 4 Overview of Study Identification Process

The remainder of the results section will be divided into three major subsections and organized as follows to answer the three questions of this review:

1. How is trade liberalization understood in analytical frameworks relating trade to health?
2. How is health conceptualized in these frameworks?
3. How do researchers theorize the mechanisms and pathways mediating the liberalization and health relationship?

2.3.1 How is Trade Liberalization Understood in Analytical Frameworks Relating Trade to Health

This section will demonstrate how trade liberalization is understood in analytical frameworks included in this review, first, by describing how trade liberalization is conceptualized and then by exploring how it is defined. As previously noted, in her influential book on poverty, Ruth Lister (2004) describes the differences between concepts, definitions and measurements. Whereas concepts operate at the general level, definitions and measurements represent areas of respectively narrower focus. In terms of trade liberalization, concepts can be understood as the broad meanings behind trade liberalizing processes as well as the contexts within which these processes take place. Definitions by contrast, offer more specific explications of the processes which characterize trade liberalization and in turn, can be operationalized via measurements.

How is trade liberalization conceptualized in analytical frameworks relating trade to health?

Frameworks were first categorized by the context in which trade liberalization is discussed. Not surprisingly, the majority of framework authors contextualize trade liberalization in relation to globalization. Others discuss trade liberalization exclusively in reference to the related contexts of structural adjustment policies (Breman & Shelton, 2007; De Vogli & Birbeck, 2005), aggregate shocks (Mendoza, 2009) development issues, (Singer, 2008; Stuckler & Basu, 2009) foreign policy (Feldbaum, Lee, & Michaud, 2010), the General Agreement on Trade in Services (GATS) (Woodward, 2005), and trade policy in general (Blouin et al., 2009; Grown, 2005; Rayner, Hawkes, Lang, & Bello, 2006; Thow, 2009).

Among framework authors who use globalization to contextualize trade liberalization, many restrict their analysis to that of economic globalization

(Beaglehole & Yach, 2003; Cheru, 2002; Koivusalo, 2006; Labonté et al., 2007; Polakoff, 2007; Smith & Signal, 2009; Woodward, Drager, Beaglehole, & Lipson, 2001, 2002) and draw on Woodward and colleagues' (2001) characterization of economic globalization as “the fundamental driving force behind the overall process of globalization” (p. 876).

Literature drawing on the framework devised by the Globalization Knowledge Network of the WHO Commission on the Social Determinants of Health also adopts the position that economic globalization is the fundamental driving force behind globalization; this literature however, does not discount other domains of globalization that may have an impact on health (e.g Labonté et al., 2007).

Other frameworks position globalization in relation to a variety of economic, political, technological, cultural, social and environmental domains (e.g. Borghesi & Vercelli, 2003; Doyal, 2002; Huynen, Martens, & Hilderink, 2005a, 2005b; Labonté & Torgerson, 2003, 2005; Lee, 2000). Few offer more narrow understandings, such as the framework presented by Cornia (2001) which defines globalization as “the process whereby national and international policy-makers promote domestic deregulation and external liberalization” (p. 834).

Many framework authors identify neoliberalism as a force shaping globalization and development policies (De Vogli, Gimeno, & Mistry, 2009; Fox & Meier, 2009; Koivusalo, 2006; Labonté et al., 2007; Meier, 2006; Muntaner et al., 2010; Polakoff, 2007; Singer, 2008; Yaşar, 2010). The 'Washington Consensus' is also highlighted as shaping globalization and its related processes by a number of authors (Corrigall, Plagerson, Lund, & Myers, 2008; De Vogli et al., 2009; Fox & Meier, 2009; Labonté & Schrecker, 2006, 2009; Meier, 2006; Yaşar, 2010). Many of these same frameworks, especially those drawing on the work of the WHO GKN, also emphasize the role of power relations in shaping the globalization context (De Vogli et al., 2009; Fox & Meier, 2009; Koivusalo, 2006; Labonté & Schrecker, 2007; Labonté & Schrecker, 2009; Labonté et al., 2007; Labonté & Schrecker, 2006; Meier, 2006; Muntaner et al., 2010).

Related to the above, some framework authors conceptualize globalization as an inevitable force albeit sometimes necessitating complementary policies (e.g. Thow 2009), whereas others acknowledge it as a political phenomenon, capable of being challenged (e.g. Labonté et al. 2007).

Framework authors also conceptualize trade liberalization by appealing to

broad ideas of openness (Beaglehole & Yach, 2003; Blouin et al., 2009; Cornia, 2001; Diaz-Bonilla, Babinard, & Pinstrup-Andersen, 2002; Doyal, 2002; Labonté & Schrecker, 2006; Labonté et al., 2007; M. B. Smith & Signal, 2009; Woodward et al., 2001), market integration (Diaz-Bonilla et al., 2002; Huynen et al., 2005a, 2005b; Labonté & Torgerson, 2003; Rene Loewenson, Nolen, & Wamala, 2010; Polakoff, 2007; Woodward, 2005) and trade flows (Polakoff 2007; Singer 2008; Huynen et al. 2005a, 2005b; Lee 2000). A range of institutions, agreements, and policies are also drawn on and shape implicit explanations of trade liberalization. Institutions commonly identified are the World Trade Organization (WTO), IMF and World Bank. Agreements drawn on include the General Agreement on Tariffs and Trade (GATT), GATS, and the Trade-Related Intellectual Property Rights Agreement (TRIPS), along with various regional and bilateral agreements. Specific measures of these agreements are also identified such as the Agreements on Sanitary and Phytosanitary Measures (SPS), and Technical Barriers to Trade (TBT).

Finally while many authors clearly position financial flows and foreign investment within conceptualizations of trade liberalization (Borghesi & Vercelli, 2003; Doyal, 2002; Polakoff, 2007; Grown, 2005; Labonté & Torgerson, 2003; Muntaner et al., 2010; Smith & Signal, 2009; Woodward et al., 2001), others seem to position these concepts in separate domains (De Vogli & Birbeck, 2005; De Vogli et al., 2009).

How is trade liberalization defined in analytical frameworks relating trade to health?

Trade liberalization itself is scantily explicitly defined in identified frameworks. However, exceptions to this finding include frameworks by Grown (2005), Hawkes (2006), Rayner and colleagues (2004), Labonté and Torgerson (2005); and Thow (2008).

One of the most comprehensive explanations of trade liberalization is provided by Thow (2009). The author outlines various aspects of trade liberalization such as its aim: “to improve economic growth through allowing countries to specialise in their production of goods and services, and trade with each other”; the forums through which trade liberalization occurs: “multilateral WTO negotiations, regional bilateral free trade agreements (FTA), negotiations for WTO accession (countries acceding are required to liberalise trade policies in line with current WTO

agreements and negotiation with current members), and liberalization of policies as a component of loan conditionalities of international financial institutions (particularly the International Monetary Fund and the World Bank); as well as the areas where the 'liberalisation of policy regimes' takes place: in "physical trade, financial flows and sectoral liberalisation". Finally, Thow establishes that the "most obvious policy changes relate to reductions in barriers to import of goods (tariff reductions), but also includes "export promotion, reducing restrictions on company ownership, financial flows and trade in services, implementing customs reforms and laws regarding equality of treatment (both for firms and countries)" (p. 2151).

Other explicit definitions are less extensive. Labonté and Torgerson (2005) for instance, define trade liberalization as "the removal of border barriers, such as tariffs, on the flow of goods and capital" (p. 161). Grown (2005) defines trade liberalization as "the progressive reduction of barriers to imports and exports" which "can occur through an autonomous decision of a government to remove or reduce barriers to exports, eliminate subsidies to domestic industries and firms, and privatize goods and services, all of which are intended to result in the freer movement of capital, goods, and labour across borders" (p. 28-29).

Definitions of trade liberalization will be further discussed in Chapter 3.

2.3.2 How is Health Conceptualized in Analytical Frameworks Relating Trade to Health

Identified frameworks are almost equally split between those exploring overall health status outcomes ($n=21$) and those exploring health inequalities/inequities ($n=20$). Some frameworks explore both overall health status outcomes and health inequalities/inequities; when this occurred, frameworks were characterized under the thematic category of health inequalities/inequities for simplification purposes.

Of those exploring overall health, chosen outcomes vary in specificity. Some frameworks for example, employ very specific measures of health such as HIV/AIDs (De Vogli and Birbeck 2005; Yaşar 2010), whereas others explore more general areas of health outcomes such as nutrition related diseases (Loewenson et al., 2010; Rayner et al., 2006; Thow, 2009), reproductive health (Grown, 2005), mental health (Corrigall et al., 2008), and occupational health (Loewenson, 2001). The majority of frameworks however, conceptualize health in broad and often undefined terms

(Bettcher, Yach, & Guindon, 2000; Blouin et al., 2009; Breman & Shelton, 2007; Cornia, 2001; Diaz-Bonilla et al., 2002; Huynen et al., 2005a, 2005b; K. Lee, 2000; Stuckler & Basu, 2009; Woodward, 2005).

Of frameworks exploring health differences between populations, the majority frame these differences as 'health inequalities' (Beaglehole and Yach, 2003; Borghesi & Vercelli 2003; De Vogli et al., 2009; Fox & Meier, 2009; Feldbaum et al., 2010; Hawkes, 2006; Labonté and Schrecker 2006; Meier, 2006; Mendoza, 2009; Muntaner et al., 2010; Singer, 2008; Smith & Signal 2009; Woodward et al., 2002). However, others use the concept of 'health equity' to frame differences (Koivusalo, 2006; Labonté & Schrecker, 2006, 2007, 2009; Labonté & Torgerson, 2003, 2005).

Within these inequality/inequity frameworks, outcome measures also vary in their specificity. The majority explore population health differences in very broad terms often highlighting implications for inequalities/inequities both between and within countries (Borghesi & Vercelli, 2003; Feldbaum et al.. 2010; Koivusalo 2006; Labonté et al. 2007; Labonté & Schrecker, 2006, 2007 2009; Labonté & Torgerson, 2005; Woodward et al., 2001, 2002). Others explore more specific areas of health differences such as nutrition related inequalities (Smith & Signal, 2009; Hawkes, 2006; Mendoza, 2009), inequalities in workers' health (Muntaner et al., 2010), inequalities in non-communicable disease prevalence (Beaglehole & Yach, 2003), and drug-related health inequalities (Singer, 2008).

Not only can frameworks be differentiated on the basis of their chosen overall health outcome, but nearly a third of all frameworks (n=14) used a readily identifiable 'frame' of health to contextualize chosen outcomes (Labonté, 2008). Identified frames are: health as a human right (Cheru, 2002; Grown, 2005; Fox & Meier, 2009; Koivusalo, 2006; Labonté et al., 2007; Meier, 2006; Polakoff, 2007), health as a development strategy (Singer, 2008; Borghesi & Vercelli, 2003; Mendoza, 2009; Fox & Meier, 2009; Corrigall et al., 2008; Stuckler & Basu, 2009), and health in reference to global public goods (Labonté et al., 2007; Labonté & Schrecker, 2006; Meier, 2006; Woodward et al., 2002). Two frameworks framed health both in reference to global public goods and human rights (Labonté et al., 2007; Meier, 2006) and another contextualized health as a human right, a development strategy and in reference to global public goods (Fox & Meier, 2009).

Of those framing health as a human right, Cheru (2002) and Labonté and colleagues (2007) both draw on Article 25 of the 1948 Universal Declaration of

Human Rights (UDHR). However, Labonté and colleagues also highlight the importance of the 1966 International Covenant on Economic, Social and Cultural Rights. Cheru additionally draws attention to the specific right to education embodied in Article 26 of the UDHR, as well as to the right to food in general. In a review of globalization's impact on child labour, Polakoff (2007) frames child health as a human right as codified in the 1989 United Nations (UN) General Assembly adoption of the Convention of the Rights of the Child, the International Labor Organization's (ILO) Convention Concerning the Prohibition and Immediate Elimination of the Worst Forms of Child Labor (also known as the Worst Forms of Child Labor Convention adopted in 1999) and the Optional Protocol to the Convention of the Rights of the Child, adopted by the United Nations in May 2000. Polakoff also highlights various domestic laws prohibiting child labor and protecting children's rights. Grown (2005) in investigating the links between trade liberalization and reproductive health draws on the importance of sexual and reproductive rights which she defines as "the prevalence, nature, and distribution of both reproductive health problems and needs within a given population, the quantity, quality, type, cost, and distribution of reproductive health services, and finally, the 'fit' between problems and services, for example, the extent to which women and men can access the services they need" (p. 29). Koivusalo (2006) discusses the implications of "commercial rights in the context of human rights and how this relates to the rights to health and access to health care". Finally, Meier (2006) and Fox and Meier (2009) question the utility of framing health as an individual right and instead frame health as a collective right to development drawing on the UN Declaration on the Right to Development.

Frameworks which position health in reference to development either describe health as a driver of economic growth (Bettcher et al., 2001), as a piece of a larger development agenda (Fox & Meier, 2009; Stuckler & Basu, 2009) or both (Corrigall et al., 2008; Meddoza, 2009; Singer, 2008; Yaşar, 2010). Two of these frameworks drew connections between health and the Millennium Development Goals (Singer, 2008; Stuckler & Basu, 2009).

Frameworks relating health to the concept of global public goods (GPGs) universally identify public health systems as a GPG. Frameworks by Labonté and Schrecker (2002) and Woodward et al. (2002) both highlight the Framework Convention on Tobacco Control as an example of how the regulation of health-

damaging products is also a GPG. However, while Labonté and Schrecker more generally emphasize the role of global governance in supplying global public goods, Woodward and colleagues emphasize the specific role of institutional frameworks and international rules. Frameworks by Meier (2006) and Fox and Meier (2009) also direct attention to the role of governance in supplying public goods. However, while Labonté and Schrecker believe that “internationally, the lack of a global government means that many kinds of public goods relevant to health are seriously undersupplied, raising important issues of health equity”, frameworks by Meier and Fox and Meier position health within a collective right to development, and see its achievement as a key instrument in facilitating the necessary international cooperation for GPGs (p. 33).

2.3.3 How Do Researchers Theorize the Mechanisms and Pathways Mediating the Trade Liberalization and Health Relationship?

Few studies included in this review explore the exclusive impact of trade liberalization on health. The exceptions are frameworks by Blouin and colleagues (2009), Thow (2009), Rayner and colleagues (2007) and Grown (2005). While Blouin and colleagues explore the health impacts of trade liberalization in general, Grown explores the specific impact of trade liberalization on reproductive health, and Rayner and colleagues, as well as Thow, explore the specific impact of trade liberalization on nutritional health.

As discussed previously, the majority of frameworks included in this review explore the health impacts of trade liberalization within broader globalization frameworks. Other frameworks explore the pathways from trade liberalization to health within broader frameworks relating to foreign policy, external shocks, and trade policy in general.

The scarcity of frameworks which focus exclusively on trade liberalization, and the abundance of those focusing on globalization, most likely reflects a logical progression of research which first needed a broad understanding of contextual factors before more specific pathways could be investigated.

Three early frameworks should be recognized for their role in setting the foundation of later work, those by: Woodward and colleagues (2001), Labonté and Torgerson (2003), and Huynen and colleagues (2005ab). A more recent framework by Labonté and colleagues (2007) also acts as the basis for a number of frameworks

included in this review and should be highlighted.

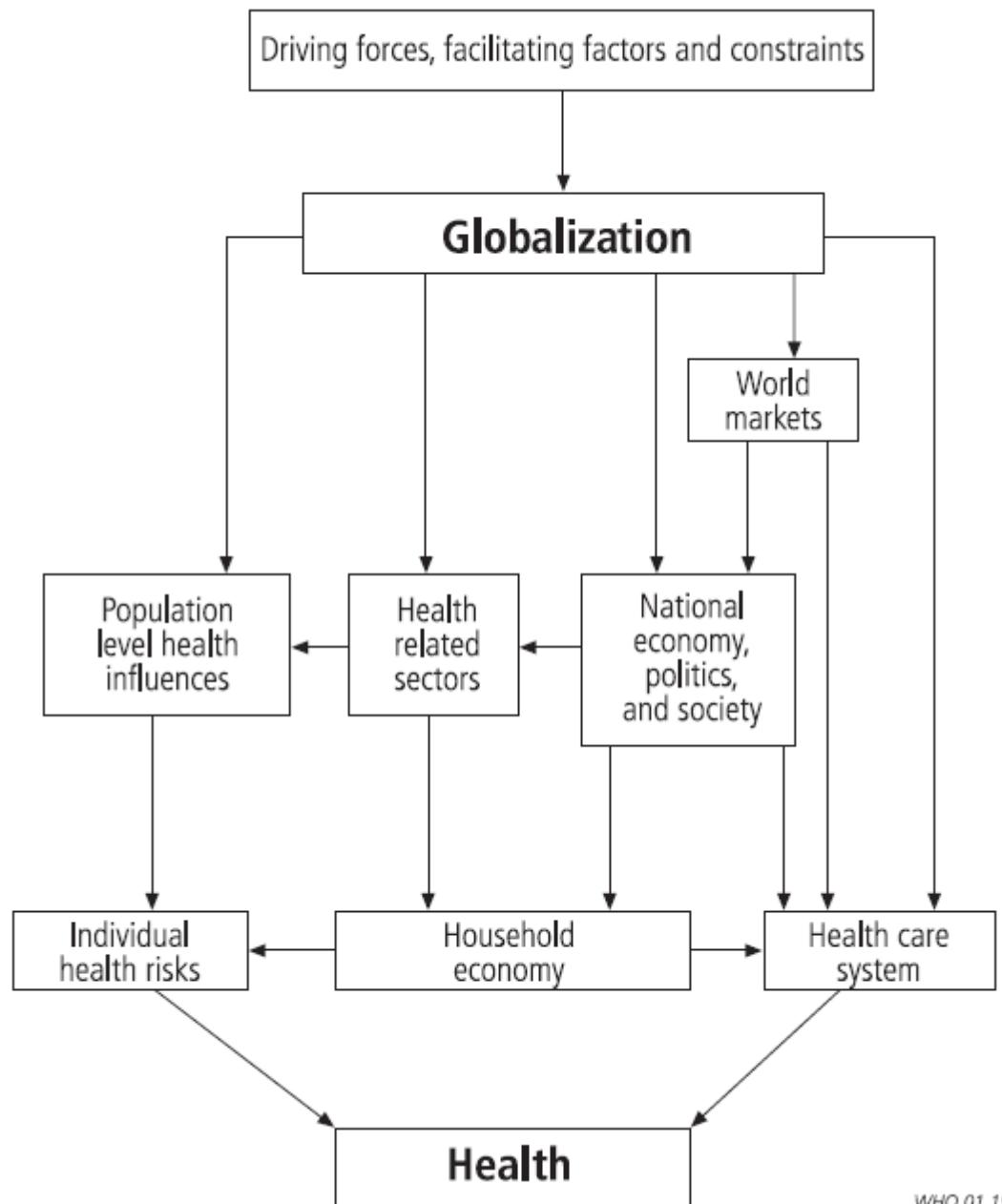
Frameworks included in this review draw largely, but not entirely, on these four works and begin to paint a more comprehensive picture of trade liberalization's impact on health. While framework authors offer many interpretations of the manifestations of trade liberalization, this review identified four, non-mutually exclusive contexts through which trade liberalization is understood to impact health: increased flows of goods and people; structural adjustment policies (including poverty reduction strategy papers); agricultural and food trade; and labour markets.

Following this introduction, this section will first describe the four most influential frameworks included in this review as mentioned above. In providing a basis for future research, these early frameworks tend to provide very general pathways between trade liberalization and health. Their strength however, lies in their ability to contextualize trade liberalization within broader political processes. Moreover, based on the framework provided by Labonté and colleagues (2007), later frameworks are more likely to incorporate pathways which account for social determinants of health. The framework by Blouin and colleagues (2009) will then be presented as the only framework that provides a broad overview of the exclusive impacts of trade liberalization on health. This framework outlines the impacts of trade liberalization and health across four major pathways: income, income inequality, insecurity and diet and nutrition. Finally, studies characterized by each of the four contexts identified above will be discussed.

Five Early and Influential Frameworks

Early and Influential Framework 1: Globalization and Health: a framework for analysis and action (Woodward et al. 2001)

The framework by Woodward and colleagues (2001) is one of the earliest identified in the review. It is also one of the most drawn on by other frameworks. Illustrated in figure 5 (in general) and figure 6 (in detail), one of the basic premises behind this framework is that “economic globalization has been the fundamental driving force behind the overall process of globalization” (p. 876). Another is that “a genuinely health-centred process of globalization can be achieved only by ensuring that the interests of developing countries and vulnerable populations are fully represented in international decision-making forums” (p. 880).



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Figure 5 Globalization and Health: a framework for analysis and action (Woodward et al. 2001 p.877)

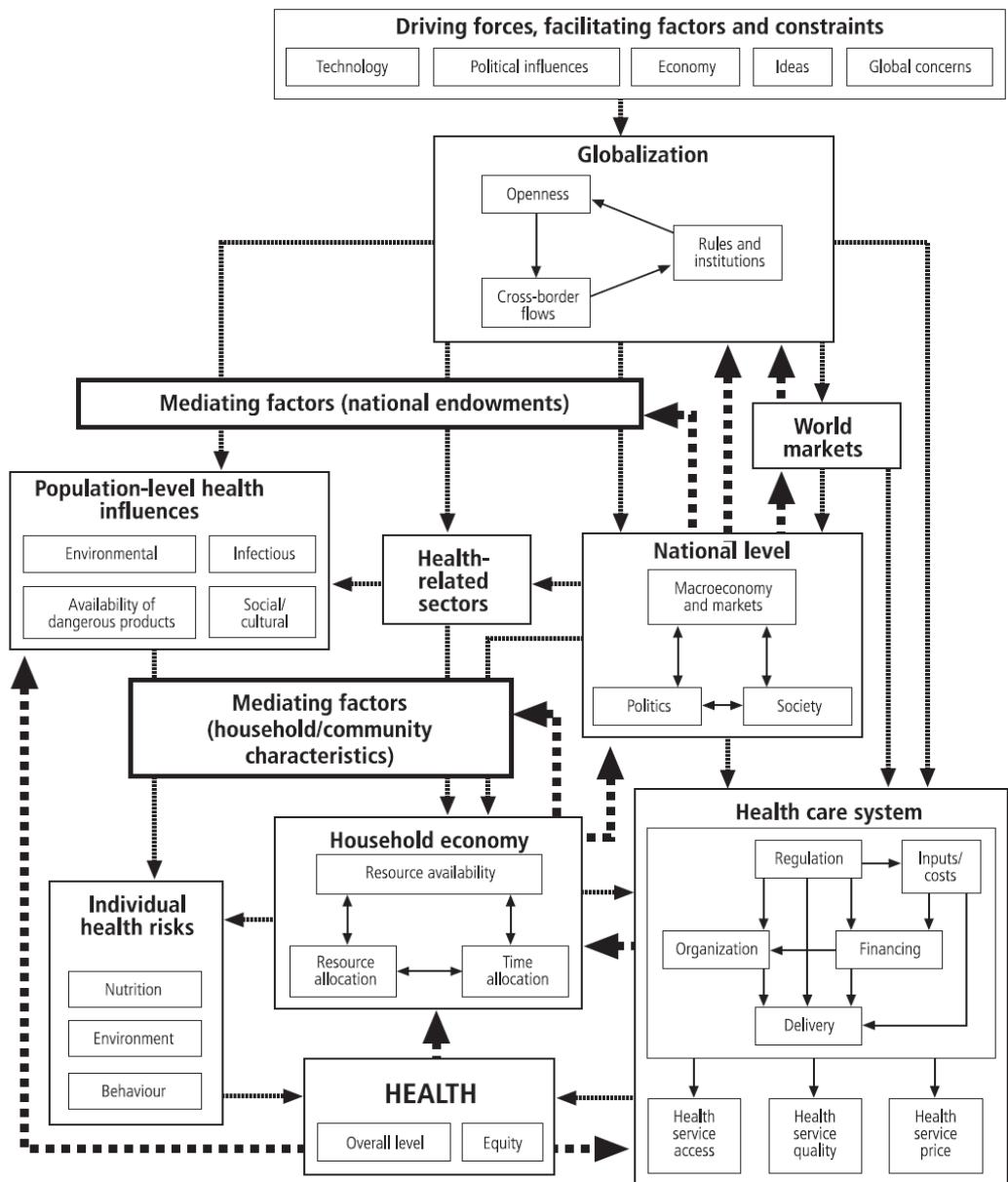


Figure 6 Globalization and Health: a framework for analysis and action (in detail) (Woodward et al. 2001 p.878)

As can be seen in figure 6, the authors conceptualize economic globalization as three processes which exist within a positive feedback loop: “[i]ncreasing cross-border flows stimulate the development of global rules and institutions, which promote the opening of economies, which increase the scale and scope of cross-border flows” (p. 876). Trade liberalization pathways can be seen as a major component of the ‘opening of economies’ process, which is associated with the “lowering of trade barriers, removal of capital controls, and liberalization of foreign exchange restrictions” (p. 876).

Pathways to health are characterized as either direct or indirect. Direct pathways include those which impact the health system or affect population level health through international markets (TRIPS, for example, is seen to directly influence health via its influence on pharmaceutical drug prices). Indirect pathways are those which act through the national and household economies. Examples of indirect pathways include for example, “the effects of trade liberalization and financial flows on the availability of resources for public expenditure on health” or for instance, “the effects on nutrition and living conditions resulting from impacts on household income” (p. 876). However, trade liberalization’s independent contribution to these pathways is not explicitly accounted for.

Finally, while not easily identifiable in the authors’ illustrations, the importance of social policies “such as safety nets and the protection of health and education spending” is noted, but not emphasized (p. 879). It is also noted, that the “extent, timing, pace, sequencing and design of policies directed towards opening the economy must be appropriate to each country’s particular circumstances” (p. 877).

Early and Influential Framework 2: Frameworks for Analyzing the Links Between Globalization and Health (Labonté and Torgerson 2003)

The framework by Labonté and Torgerson (2003) also represents both an early and influential work in the area of globalization and health. Commissioned by the WHO, this framework is based upon a review and critique of other frameworks relating globalization to health and “might best be considered the rudiments of a smaller set of frameworks to guide future research and policy analysis” (see figure 7) (p. 12).

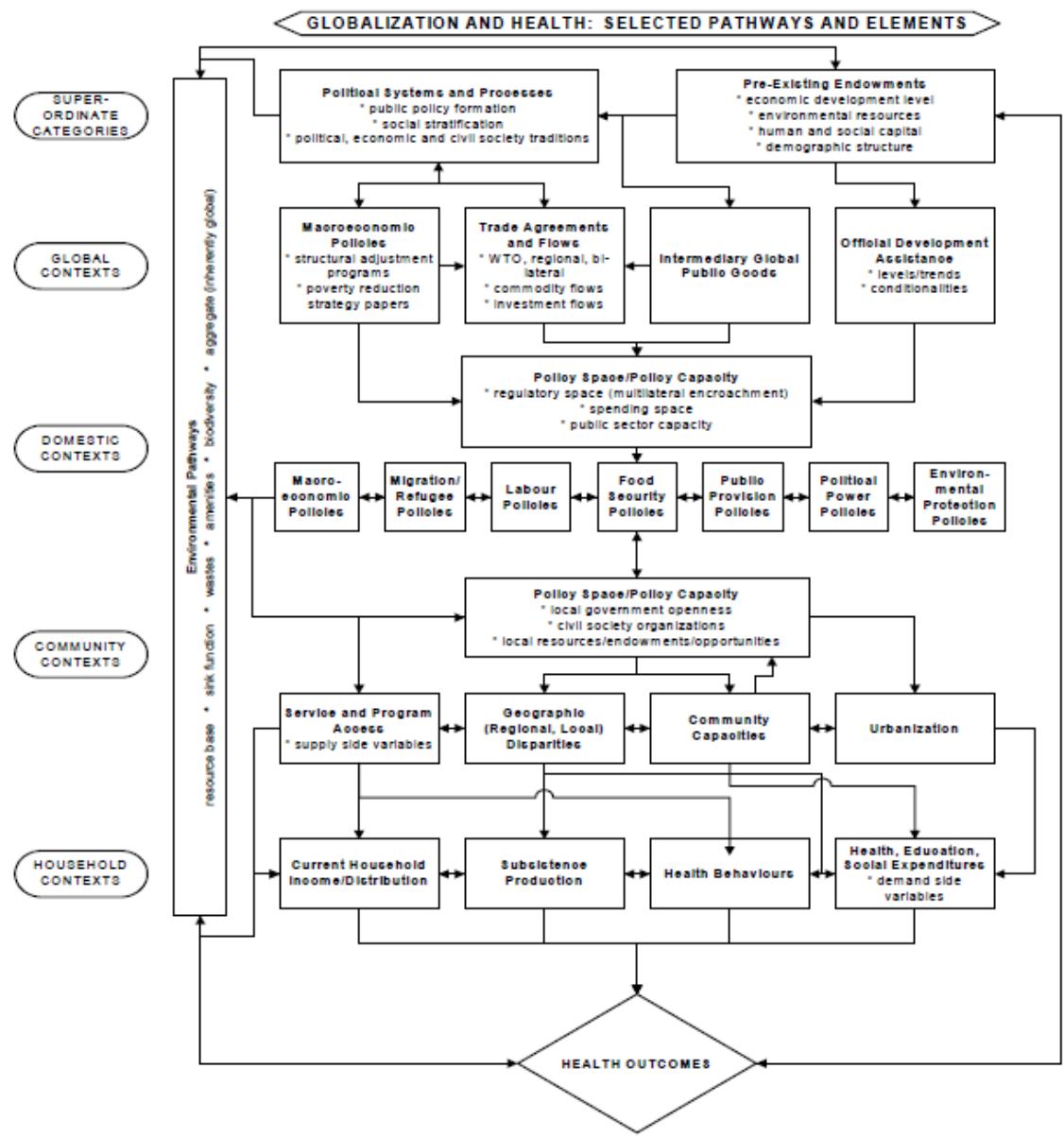


Figure 7 Framework for Analyzing the Links Between Globalization and Health (Labonté and Togerson 2003 p.13)

In this framework, trade liberalization is identified as a defining characteristic of globalization, and conceptualized by appealing to trade flows and the idea of “free trade”. The authors note that few of the frameworks included in their review “extend this emphasis on trade to include an analysis of trade policies (e.g. tariff reductions, export subsidies” (p. 9). They also note that “[m]ost framework authors regard trade agreements as a driving force in increased trade flows” and that “[o]nly a few distinguish the potential health impacts of trade liberalization from de-regulation of global finance markets” (p. 9).

In a hierachal fashion, the authors organize pathways between globalization

and health via super-ordinate, global, domestic, community and household contexts.

The super-ordinate context refers to countries' pre-existing endowments (such as per capita income, natural resources, human capital, and demographic profiles) and political systems and processes which together shape domestic policy responses to national outcomes of globalization processes. Globalization can for example, be mediated by a country's "acceptance of discrimination (on the basis of race, ethnicity or gender), definition of public need and attitudes towards privatization, determination of public policy, level of unionization and accountability of public administration" (p. 14). Conflict and political instability, the extent of status hierarchies and power relations are also seen to determine to what extent macroeconomic policies are accepted or complied with domestically.

The global context is seen to impact health through four key pathways: macroeconomic policies; trade agreements, flows and institutions; intermediary global public goods and; official development assistance. Aspects of trade liberalization are identified within the pathways of macroeconomic policies and trade agreements and flows, as described below.

Domestic Macroeconomic Policies

Discussion of macroeconomic policies is largely focused on the conditionalities embedded within SAPs and PRSPs. Trade liberalization is identified as one of five general reform areas of SAPs which "allow[s] free markets to establish prices" through "tariff reductions, removal of import controls and [by] eliminating restrictions on foreign investment/capital markets" (p. 19). Other areas of reform include the reduction of state controls on prices, the privatization of state-owned productive assets, domestic austerity measures such as reduced government spending, and re-orientation of state processes "towards enhancing development of the private sector" (p. 20).

The authors' review identifies a range of impacts associated with SAPs such as, inequalities in access to health services, negative environmental impacts, increasing food prices, declining government expenditures, social polarization, and increases in poverty and income inequality.

Policies associated with PRSPs are seen to rely on the privatization of "state productive assets, increased trade liberalization" and "cost-recovery for health, education and other social programs" (p. 23). In comparison to the work done on

SAPS, fewer studies included in the authors' review investigate the impacts of PRSPs. Highlighted criticisms however, outline important implications of PRSPs for health: namely that PRSPs emphasize cost recovery mechanisms for healthcare services such as user fees while ignoring the failures of fee-exemption programs for the poor. PRSPs are also criticized on the basis that they lack clear commitments to the provision of resources important for health and education, and because they fail to consider health as an outcome rather than simply a means of development.

Trade Agreements, flows and institutions

Within this pathway trade liberalization is seen to have impacts across five domains: the physical environment, the social environment, competitive pressures, (the loss of) regulatory space, and capital markets. Within the physical environment specific trade liberalizing policies are not explicated but noted are associated losses in bio-diversity, deterioration of landscapes, as well as consumption related environmental degradation. Within the sphere of the social environment, the authors exclusively highlight decreased government revenues resulting from tariff reductions. Also noted is the fact that many countries have been unable to implement alternative sources of funding in the face of these declines. Tariffs are observed to be of particular importance for developing countries, given that they "constitute a very large portion of overall tax revenue in many developing countries, compared to an average of only 4% for high-income nations" (p. 26).

Highlighted in the domain of "competitive pressures", are the largely negative impacts on domestic manufacturing brought about by the introduction of cheap foreign imports. It is highlighted for instance that the introduction of cheap imports has "weaken[ed] the local entrepreneurial base" in the Indian state of Kerala, which "will erode the State's ability to tax domestic wealth for purposes of income redistribution, gender empowerment, maternal/child health and other low wealth/high health outcomes" (p. 27).

In the fourth domain, trade liberalization is associated with a loss of domestic regulatory space largely through the implementation of trade agreements. Agreements highlighted within this domain are the WTO Agreement on Trade-Related Investment Measures (TRIMs) which "for example, prevent countries from placing performance requirements (such as requiring local content) on foreign investment", the WTO Agreement on Government Procurement which "requires

governments to take into account only “commercial interests” when making purchasing decisions, specially banning preferences based on environment, human or labour rights”, and the Agreement on Sanitary and Phytosanitary Measures which “requires that a country’s food and drug safety (sanitary and phytosanitary) regulations be based on a scientific risk assessment, even if there is no discrimination between domestic and imported products” (p. 28).

It is noted that a loss of domestic regulatory space can have both positive and negative implications. It can be positive for example, if it prevents governments from providing support to environmentally destructive firms. It can be negative however, if it prevents governments from enacting health protecting regulations.

Finally, costs of implementing trade agreements are described as exceeding some of the least developed countries' development budgets, which along with low levels of public sector employment, are seen to further restrict domestic regulatory space.

In the final domain, the liberalization of capital markets, Labonté and colleagues note other authors' claims “that liberalization in capital markets has had far more negative and very little positive impact than has liberalization in goods” (see for example, Cornia (2001) and Labonté (2001)) (p. 28). Although it is also acknowledged that capital market liberalization policies can be mediated by actions in other areas.

Foreign direct investment (FDI) is observed to be largely the province of developed countries with 90% of it taking place between North America, Europe, Japan and China. Seventy percent of the world's population shares the remaining 10%, with Sub-Saharan receiving only 0.5%. However, it is also noted that “[d]espite the low proportionate flow, FDI still crowds out domestic investment in most African countries, which means that many countries' economies are now being driven almost entirely by foreign investors who may have little interest in the country other than how it might affect returns on investment, a condition referred to as “compradorization” (p. 29). FDI is also noted to have “only been successful in creating employment in developing countries when it has been in very large amounts (e.g. Singapore, Malaysia, the Mexican maquiladoras), which precludes a fairer distribution of FDI amongst all developing countries” (p. 29). It also “generally takes advantage of low labour costs rather than developing new technological capacities in the host country, rendering the employment and its associated economic

growth very fragile” (p. 29). Finally, both capital mobility and transfer pricing (“in which companies engage in intra-firm trade with their own subsidiaries”) are noted to impede the ability of governments to generate revenue, even when FDI is substantial (p. 29).

Trade liberalization is not discussed explicitly in relation to domestic, community and household contexts in this framework, however, these areas are understood to be impacted by trade liberalization policies presented in the global context. Domestic contexts influenced by global contexts include macroeconomic policies, migration/refugee policies, labour policies, food security policies, public provision policies, political power policies and environmental policies. Community contexts influenced by these domestic policies are access to services and programs, geographic disparities, community capacities and urbanization. Household contexts are, in turn, influenced across the domains of income distribution, subsistence production, health behaviors and social expenditures. Finally, environmental pathways are seen to influence and be influenced across each of these contextual levels.

Early and Influential Framework 3: The health impacts of globalisation: a conceptual framework (Huynen et al. 2005ab)

Huynen and colleagues (2005ab) acknowledge the importance of the above two frameworks, but argue that their focus on economic globalization and international governance is too limited. The authors argue that “a conceptual framework for the health effects of the globalisation process requires a more holistic approach and should be rooted in broad conception of both population health and globalisation” (p. 1). The authors highlight that “proximal factors act directly to cause disease or health gains, and distal determinants are further back in the causal chain and act via (a number of) intermediary causes” (p. 2).

Globalisation is acknowledged to be a highly complex, multifaceted phenomenon which can be defined as “an intensification of cross-national cultural, economic, political, social and technological interactions that lead to the establishment of transnational structures and the global integration of cultural, economic, environmental, political and social process on global, supranational, national, regional and local levels” (p. 2). However, in order to focus their conceptual model the authors decide to set apart “the following important features of

globalisation: (the need for) new global governance structures, global markets, global communication and diffusion of information, global mobility, cross-cultural interaction, and global environmental changes" (p. 2). Trade liberalization can be seen as an aspect of global markets.

Within the authors' conceptual model (see figure 8), these features of globalization are seen to impact distal determinants of health such as "health (-related) policies, economic development, trade, social interactions, knowledge, and the provision of ecosystem goods and services. In a more detailed illustration of the authors' framework (figure 9), global markets are seen to impact economic development and trade. Within the domain of economic development, the historical debate over whether economic globalization benefits or harms countries is revisited. Within the domain of trade, increased global trade flows are of primary concern.

Economic development and trade are seen to affect the more distal determinants of health, including health services, the social environment, lifestyle factors, the physical environment, as well as access to food and water. While the specific mechanisms through which this occurs is not explicated, increased flows are often the main culprit, except in the case of food security where "liberalization policies are expected to have profound implications on food trade and, subsequently food security" (p. 9).

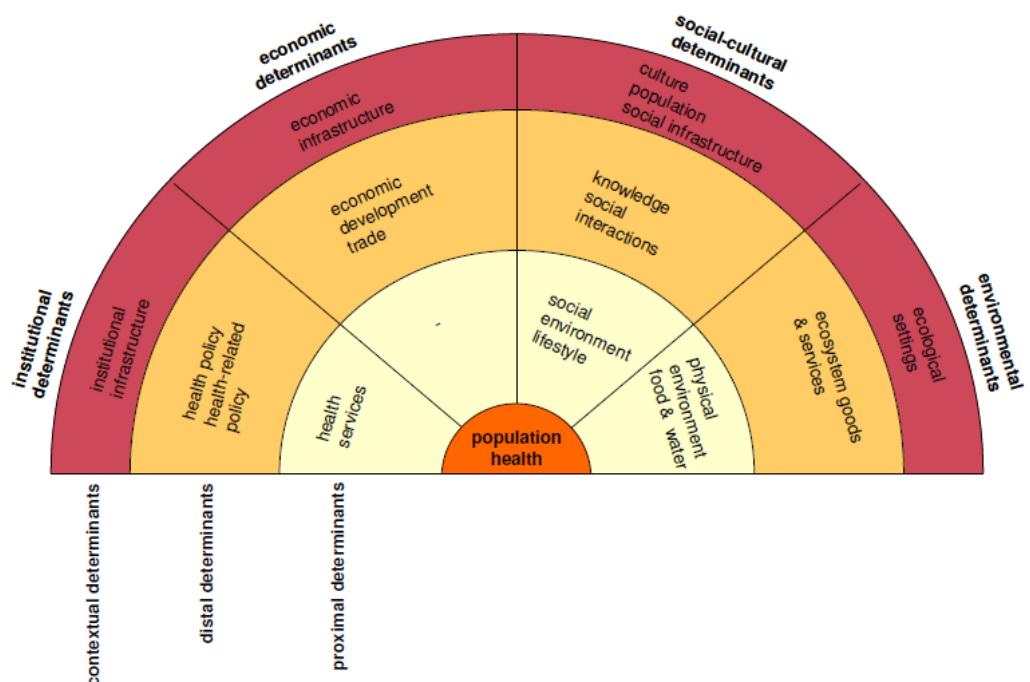


Figure 8 The health impacts of globalisation: a conceptual framework (Huynen et al. 2005 p.3)

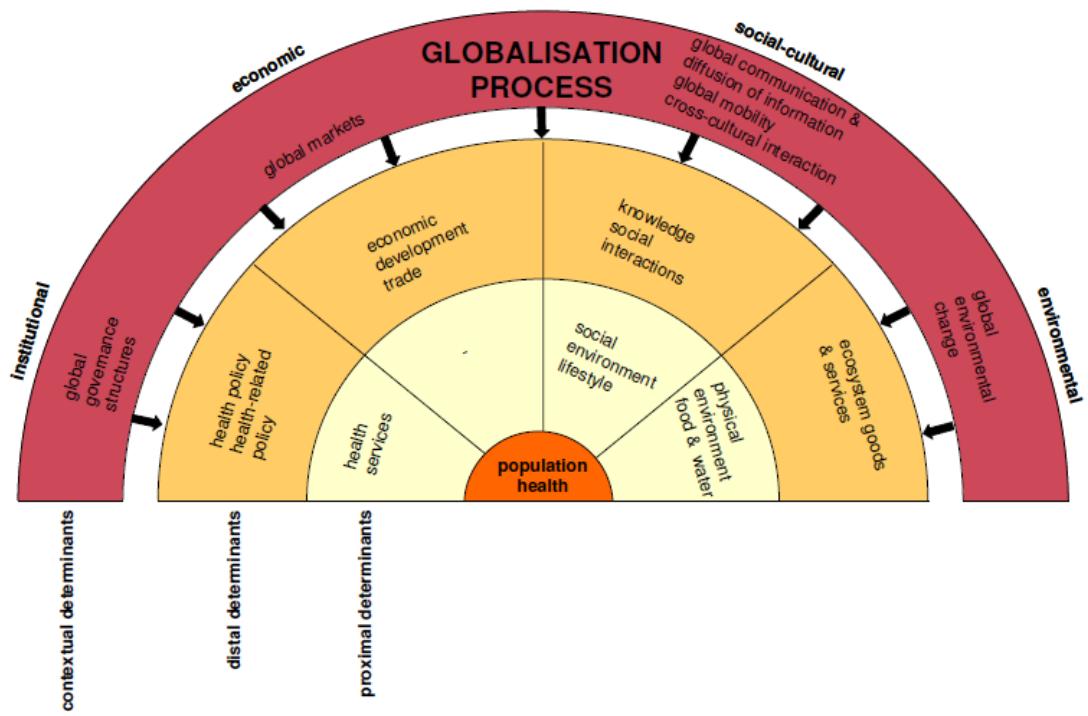


Figure 9 The health impacts of globalisation: a conceptual framework (in detail) (Huynen et al. 2005 p.5)

Early and Influential Framework 4: Towards Health-Equitable Globalisation: Rights, Regulation and Redistribution (Labonté et al. 2007)

This framework was developed by the WHO Globalization Knowledge Network (GKN) which was formed in 2005 to investigate the ways in which globalization influences the social determinants of health. The authors underscore an explicit concern for equity in access to these determinants. Given this primary concern with equity, gains and losses of globalization are not weighed against each other in the developed framework. This is because the authors believe that “deterioration in access to [SDOH] for relatively disadvantaged members of society cannot be balanced by gains elsewhere if the effect is to increase inequity” (p. 19).

A definition of globalisation is adopted from Jenkins (2004) where globalisation is understood as ““a process of greater integration within the world economy through movements of goods and services, capital technology and (to a lesser extent) labour, which lead increasingly to economic decisions being influenced by global conditions”—in other words, the emergence of a *global marketplace*” (p. 17). Like Woodward and colleagues (2001) and Labonté and colleagues (2003), the authors take economic globalization as primary importance and do so on the basis that most “dimensions and manifestations of globalisation that are not obviously

economic in nature nevertheless, on closer examination, are best explained or understood with reference to economic factors” (p. 16). However, the authors also acknowledge that “economics is not the entire story of globalisation and its effects on health” and argue that “the perspective on globalisation [they’ve] adopted does not assume away various dimensions of globalisation that are not self-evidently economic” (p. 17).

Both a simple and complex framework is presented (see figures 10 and 11 respectively). These frameworks draw on work by Didrichsen, Evans and Whitehead (2001) which identifies “four main mechanisms—social stratification, differential exposure, differential susceptibility, and differential consequences—that play a role in generating health inequities” (Labonté et al., 2007, p. 14). As can be seen in figure 11, proxies of social stratification include factors related to income, education, gender etc. Factors related to differential exposures and vulnerabilities on the other hand are associated with things like living and working conditions, food quality and security, and environmental conditions. Six factors are identified for mediating the relationship between globalisation and health: “material deprivation, medical progress, acute psychosocial stress, unhealthy lifestyles, stratification and lack of social cohesion, and positive and negative shocks” (p. 26). These factors interact across four main pathways to affect health: asymmetries in power and resources; trade liberalization; aid and investment; and basic needs.

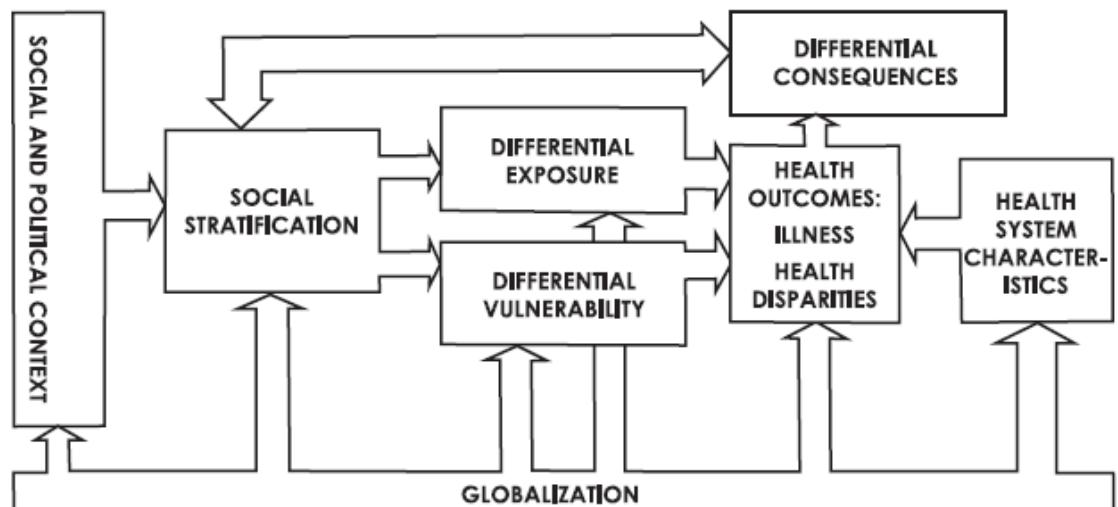


Figure 10 Towards Health-Equitable Globalisation: Rights, Regulation and Redistribution (Labonté et al. 2007 p.18)

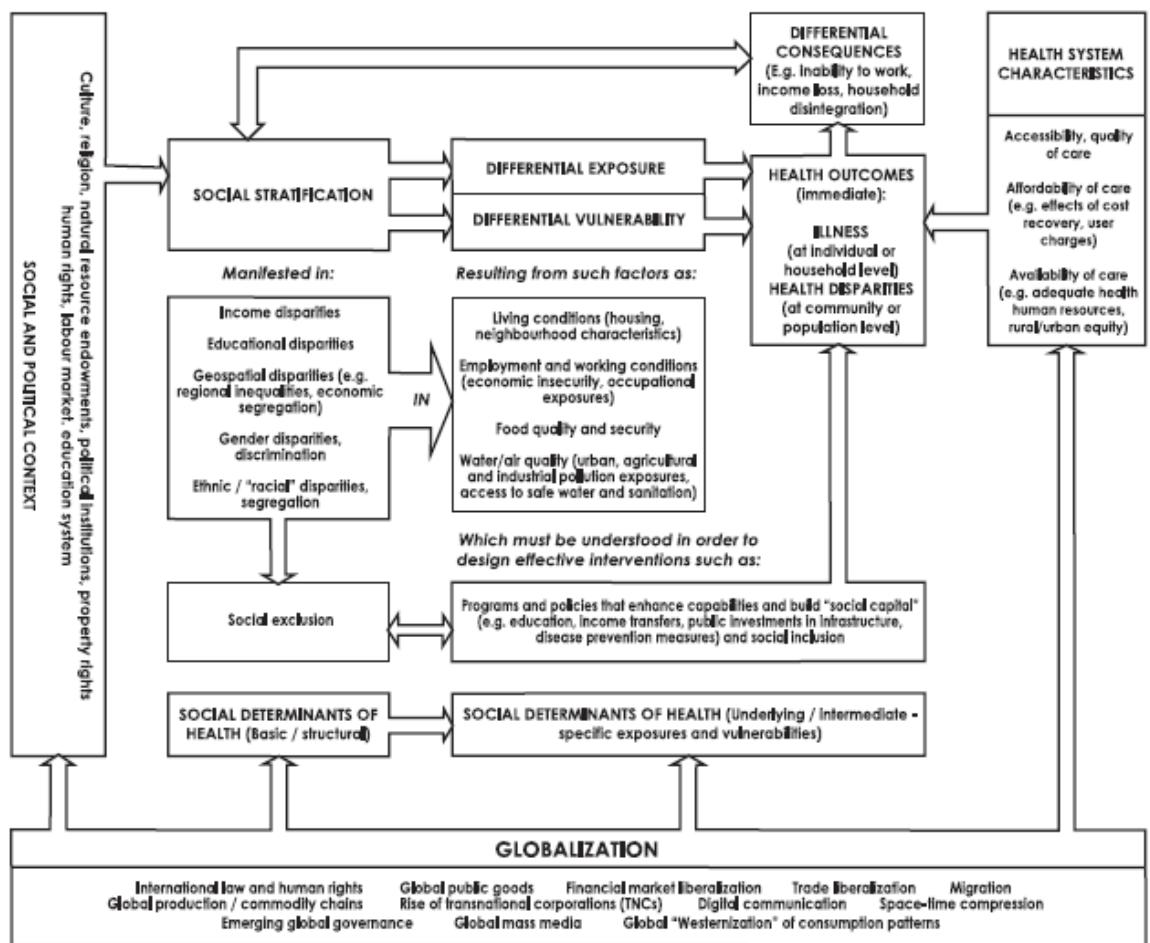


Figure 11 Towards Health-Equitable Globalisation: Rights, Regulation and Redistribution (Labonté et al. 2007 p.87)

Trade liberalization is related to a limited number of issues namely economic insecurity, declines in public revenues, trade in health services, and food security. Specific trade liberalizing policies and their relationship to these factors however, is not comprehensively explored.

That said, trade liberalizing policies which promote exports are, in general, related to a high suicide rate among farmers in India via economic insecurity. Reductions in tariffs and regulatory barriers are also seen to increase economic insecurity by decreasing workers' revenues and shifting employment. It is also highlighted that trade liberalization, in conjunction with financial liberalization, has meant "more volatile markets and increased frequency of external shocks (such as financial crises, currency devaluations and rapid changes in labour markets and employment) which translate into increased economic insecurity of individuals" (p. 41). Similar to claims made by Labonté and colleagues (2003), the relationship

between trade liberalization and economic instability on its own however, is acknowledged to be less robust.

It should also be noted that social protection policies are highlighted within this pathway for their role in mitigating the relationship between trade liberalization, economic insecurity and health. For example, the reduction or elimination of tariffs on imports is noted for decreasing public revenues and spending on “health, water, social services and other public initiatives linked to [SDOH]” in developing countries (p. 42).

GATS is associated with trade in health services and while it remains unclear the impact this agreement will have on health, the authors highlight concerns surrounding its potential to contribute to the commercialization of health services and thus inequities in access to health services.

Finally, decreases in food security are seen to be impacted by trade liberalization through greater competition between local producers and foreign imports. Trade liberalization is also associated with decreasing food security through policies which promote cash cropping and instabilities in global food prices. It is acknowledged that “little evidence directly addresses the link between trade liberalisation and food security” (p. 45), that “greater attention needs to be given to the sequencing of [trade] reforms”, that “transitional compensatory measures targeted to lower-income groups may be needed”, and that “[f]or countries with a large proportion of low income and resource-poor people living in rural areas and who depend on agriculture, reforms aimed at raising productivity and at non-agricultural employment creation are essential for enhancing food security” (p. 46).

Early and Influential Framework 5: Trade and social determinants of health (Blouin et al. 2009)

As previously noted, few studies included in this review explore the exclusive impact of trade liberalization on health. The framework provided by Blouin and colleagues (2009) is alone in providing a broad overview of the health impacts of trade liberalization, though other studies do explore the specific impacts of trade liberalization on reproductive health and nutritional outcomes (see Thow 2009, Rayner et al. 2007 and Grown 2005).

In this framework the authors focus on pathways which lead from trade liberalization to health via SDOH (see figure 12). Four major pathways are identified

on the basis of work done by Cornia and colleagues (2008): income, inequality, economic insecurity and unhealthy diets. These factors are in turn seen to impact health via material and psychosocial pathways.

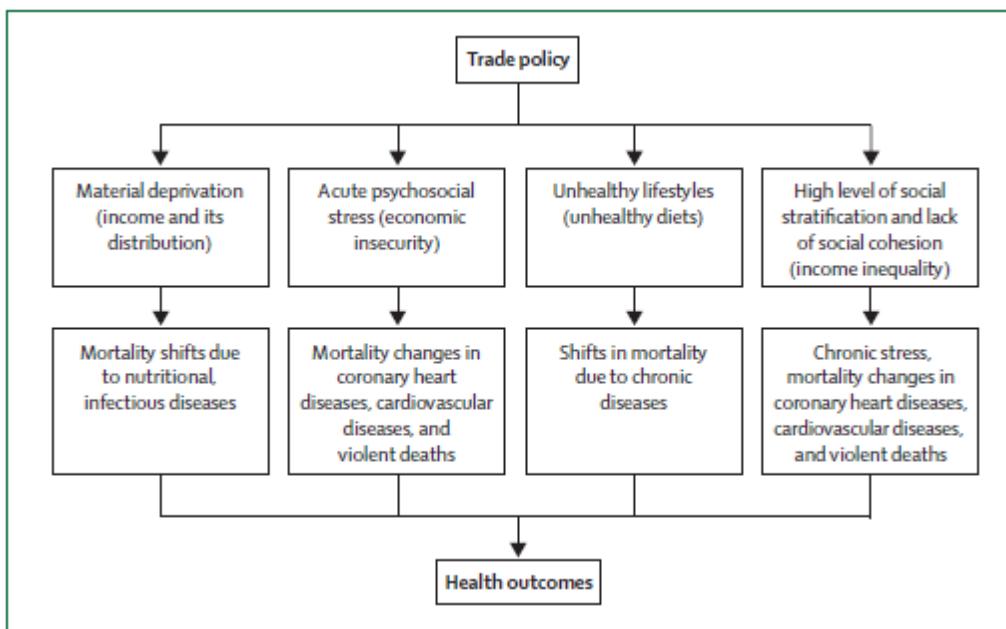


Figure 12 Trade and social determinants of health (Blouin et al. 2009 p.503)

Income

In the first pathway, the debate between trade liberalization, growth and poverty is recounted. The claim that trade enhances growth, reduces poverty, and thus improves health is exchanged for a more nuanced assessment. The authors argue that “trade liberalization alone is insufficient to boost the economy” and that “[c]omplementary policies are needed to ensure that trade openness leads to a high level of growth” (p. 503). Necessary policy conditions “include a stable macroeconomic environment, competitive exchange rate, solid fiscal policies, well functioning agricultural and labour markets, and physical infrastructure (port roads, telecommunications)” (p. 503). The authors also note the potentially disequalizing impacts of “a country reducing or removing its barriers to imports and foreign investment and subsequent outcomes on the poverty level of its own population” due to shifts in employment patterns and changes in prices of and external demand for goods (p. 503).

Inequality

In the second pathway, the authors identify other common assumptions of trade liberalization: “that developing countries, which have an abundance of

unskilled labourers, would gain from trade in products produced by unskilled labour” and furthermore that “the position of unskilled labour in the labour market would be enhanced vis-à-vis other factors of production, leading to a fall in the skills premium and hence reductions in inequality” (p. 504). These claims are rejected however, on the basis of evidence from poor countries which demonstrates a relationship between increasing wage inequalities, trade openness in general and tariff reductions in particular.

Economic Insecurity

Like Labonté and colleagues (2003 and 2008), in the third pathway, Blouin and colleagues (2009) recognize that “trade liberalisation is usually accompanied by enhanced openness to foreign capital and liberalisation of financial markets and services”, and that this combination “is often associated with heightened economic insecurity” (p. 504). Economic insecurity is seen to be influenced by these processes via “financial crises, currency devaluations, and rapid changes in labour markets and employment” (p. 504). However, it is acknowledged that there are challengers to this view (for example, Bourguignon & Goh, 2003).

Without explicating specific trade liberalization policies, the authors focus their attention in this pathway on the movement of labour from one sector to another and reference a single study by the ILO (Torres, 2001). This study examined 77 countries and demonstrated that “high levels of international trade in a national economy were associated with increased movement of workers between sectors” (Blouin et al. 2009, p. 504). It is highlighted that “[t]his process--known as churning—needs social safety nets and smooth employment transition mechanisms to lessen material and psychological stress to workers and their families” (p. 504).

Unhealthy Diets

In the final pathway trade liberalization is related to diet and nutrition via changes in food prices, “increased desirability and availability of unhealthy foods, worsening asymmetry between consumers and suppliers of foodstuffs, and growing urbanization and changes in lifestyle” (p. 504). However, while case studies are drawn on to illustrate these relationships, specific trade liberalization policies remain unnamed. In addition, financial liberalization is seen to affect food availability in this pathway through the penetration of supermarkets and foreign investment in fast-food outlets.

Summary

The above discussed frameworks identify a range of factors which are related to trade liberalization and important for health. While all of the above frameworks identify potential pathways through which trade liberalization impacts health, specific liberalizing policies are only rarely named and never comprehensively explored.

However, for the purposes of this review, one of the strengths of the early frameworks is their thorough contextualization of trade liberalization within larger processes of globalization. It has been argued elsewhere that a particular advantage of the framework devised by Woodward and colleagues (2001) is that it “focus[es] on the range of policy choices (by both governmental and private actors) that operate at the supranational level to affect health” (Labonté et al., 2005, p. 8). The authors’ representation of economic globalization as a feedback loop is also a particularly useful tool for understanding how trade liberalization is propagated. In a similar vein, De Vogli, Gimeno and Mistry (2009) propose a conceptual framework which demonstrates how public policies and economic inequality also exist as part of a feedback loop. The authors argue that policy reforms representing the ‘Washington Consensus’, including “financial deregulation, trade liberalization, privatization of state enterprises, flexibilisation of labour markets and reductions in public expenditures for health and social welfare”, have contributed to the growth of transnational corporations (TNC) (p. 689). This growth in turn, is noted to have allowed TNCs to further advance policies of the Washington Consensus. It is argued that this “feedback between globalization and the accumulation of wealth and power among TNCs is key to understanding the increase in economic inequalities between and within countries”, as well as the resulting health inequalities (p. 689). However, it is also noted that progressive welfare policies can counteract the described feedback loop and limit increases in health inequalities. Together the two frameworks provide a more comprehensive context within which trade liberalization can be understood.

It has also been acknowledged that a key strength of Labonté and colleagues’ (2003) framework “is its explicit attention to globalization’s influences on the “policy space” available to national and subnational governments” (Labonté et al., 2005, p. 8). While the authors associate trade liberalization with a (loss of) policy space via trade agreements, it is unclear how all the agreements identified by the

authors relate to trade liberalization, for instance, the WTO Agreement on Government Procurement or the Agreement on Sanitary and Phytosanitary Measures. The supra-ordinate context described in this framework is however, particularly useful for the purposes of this review, as it identifies a range of factors that shape acceptance of and domestic policy responses to globalization processes, including trade liberalization.

A limitation of these two frameworks is their arguably limited focus on SDOH. Woodward and colleagues, for instance, focus their description of globalization's impact on health around health systems (Labonté et al., 2005). Labonté and colleagues (2003), while incorporating many social determinants of health into their framework, fail to provide a detailed analysis of the mechanisms "by which various causal pathways lead to changes in individual and population health status" (Labonté et al., 2005, p. 8).

The frameworks by Labonté and colleagues (2007) and Blouin and colleagues (2009) specifically respond to these issues. Labonté and colleagues do so by exploring the health impacts of globalization through SDOH pathways and by incorporating Diderichsen, Evans, and Whitehead's (2001) health inequity model into their framework. Blouin and colleagues (2009) do so by identifying four pathways which are impacted by trade liberalization and lead to different distributions of health: income, income inequality, economic insecurity, and unhealthy diets.

One criticism of the framework by Blouin and colleagues (2009) is that it doesn't account for the positive impacts of trade liberalization on health (Bovet & Paccaud, 2009). Based on the purposes of this review, other concerns with this framework relate to its under-conceptualized pathways. In the income pathway for example, the debate between trade liberalization, growth and poverty is recounted but rests largely on the results of empirical tests versus a theoretical consideration of potential pathways. Labour markets and wage differentials are the primary concern in the income inequality pathway, although conceivably trade liberalization may impact income inequality through other domains for example, food prices and government spending. The same case may be made for the economic insecurity pathway. Additionally, while the role of social policies is emphasized by the authors, a consideration of the impacts of trade liberalization on government revenues, an important determinant of social policy, is also absent.

In total, the above discussed frameworks have been influential in that they set the precedent for much of the contemporary work on globalization and health. Frameworks included in this review draw largely, but not entirely, on these works and begin to paint a more comprehensive picture of trade liberalization's impact on health.

The above discussed frameworks are also influential in that they very much represent landmark investigations along a research continuum which sets the precedent for understanding the relationship between trade liberalization and health. While early frameworks establish the context in which trade liberalization can be understood as an essential component of greater globalization processes, later frameworks begin to account for a wider range of health influencing pathways by incorporating a SDOH perspective. More recently, the framework by Blouin and colleagues (2009) is the first attempt at comprehensively examining the specific impacts of trade liberalization on health. Nonetheless pathways presented in this latter framework could be further developed for reasons discussed above.

While framework authors offer many interpretations of the manifestations of trade liberalization, this review identified four, non-mutually exclusive, contexts within which trade liberalization is understood to impact health: (1) increased flows of goods and people; (2) agricultural and food trade; (3) structural adjustment policies (including poverty reduction strategy papers) and (4) labour markets. However, it is worth reiterating that these contexts were identified in the context of a selective search strategy which excluded studies which focused exclusively on health services, tobacco, alcohol, medicines or food. Moreover, while these contexts are non-mutually exclusive, pathways described by framework authors almost always emphasize aspects of one of these contexts over another and were thus characterized accordingly. However, when framework authors present a pathway in a way in which there is strong overlap between two contexts, the pathway is included in discussions of both contexts. Moreover, while these contexts were conceived to organize pathways presented by frameworks, rather than the frameworks themselves, few frameworks span more than one context.

Increased flows of goods and people

In this context, trade liberalization is often seen as playing a central role in increasing the flow of goods and people. Framework authors who relate trade

liberalization to increased flows of goods often do so in relation to food. Because so many authors explore the specific impact of food trade on health, these frameworks will be explored in a separate section below.

Other framework authors exploring trade liberalization's impact on the flow of goods and people often do so in terms of communicable and non-communicable diseases. Historically speaking, communicable diseases are one of the most well-known health risks of increased trade (Bettcher et al., 2000). In a framework exploring the impact of globalization on health, Lee (2000) identifies trade liberalization as a driver of economic change, influencing communicable diseases through a range of intermediary determinants of health. Without specifying specific trade liberalizing mechanisms, communicable diseases are seen to increase with the "greater worldwide mobility of people, through business, tourism, rural-urban migration and displacement" (p. 256). Communicable diseases are also seen to be impacted by increased flows of animals, plants and other goods.

Woodward and colleagues (2002) support Lee's position and highlight the association between communicable diseases and the increased movement of people, animals, and animal products. The authors also note that increased flow of goods have "led to new human diseases, for example, bovine spongiform encephalopathy" (p. 6). Again specific trade liberalizing mechanisms are not named. Feldbaum and colleagues (2010) also support Lee's position but note the specific negative impact of tariff reductions (in conjunction with the inadequate regulation) on the spread of communicable disease.

Also explored by framework authors are the impacts of increased flows of goods on non-communicable diseases. In one of the earliest frameworks included in this review Bettchar and colleagues (2000) note that "the health risks and benefits associated with the liberalization of trade in goods are highly dependent on the nature of the commodities concerned" (p. 5). The authors identify four categories of goods: "legal and beneficial (e.g. nutritive food and cost-effective technology); legal and of doubtful benefit (e.g. technologies of low cost-effectiveness); legal and harmful (e.g. tobacco, alcohol and weapons); illegal and harmful (e.g. illicit drugs)" (p. 5). The authors focus their discussion on the health impacts of increased tobacco trade which is seen to be facilitated by "significant reductions in tariff and non-tariff barriers to trade" (p. 5). Woodward and colleagues (2002) supplement this conception by acknowledging transnational tobacco corporations "as among the strongest

proponents of tariff reduction and open markets” (p. 7). Doyal (2002) additionally highlights the impacts of tobacco trade on women, but while citing ‘liberalization’ as the culprit behind gendered consumption trends, fails to name specific liberalizing policies.

Beyond communicable and non-communicable diseases, Singer (2008) relates import liberalization to an increased flow of drugs, noting a range of health impacts as well as differential influences across “countries of production, countries of trans-shipment, and countries of targeted consumption” (p. 469). Singer discusses the impact of legal drugs such as tobacco and alcohol in relation to global use trends, but focuses to a large extent on the health impact of illegal drugs, implicating pharmaceutical companies as an increasingly important “source of illicitly consumed drugs in developing countries” (p. 471). Here health impacts are framed as a hindrance to development since they cause losses in productivity, both in terms of supply and demand.

On the supply side it is noted that workers employed in the production of illicit drugs are exposed to health threats via exposure to toxic chemicals. The authors also note particularly poor social relations between workers and their employers, an inability of lab workers to organize, and the inability of workers to appeal for help from the government. On the demand side, Smith and Signal note that “drug use lowers productivity through occupational injuries, the spread of diseases, and drug overdose” (p. 473). Illicit drug use is also noted to disproportionately impact the youth, and is associated with various physical and mental health problems as well as the corruption of public officials and the breakdown of public institutions and violence.

Summary

It is acknowledged by Bettchar and colleagues (2000) that trade liberalization may increase the availability of products beneficial to health. However, framework authors exploring the health impacts of trade liberalization via increased flows of people and goods (outside of food trade) often cite negative consequences for both communicable and non-communicable diseases. It is unclear trade liberalization’s specific role in either of these contexts given specific liberalizing strategies are rarely identified. Tariff reductions are identified by one framework author as facilitating increases in communicable diseases, though a clear picture of the relationship is not

provided. Reductions in both tariff and non-tariff barriers are identified by another framework author for their role in increasing non-communicable diseases, although again, the relationship between the two remains vague at best.

The impacts of tobacco consumption are an area of common concern among framework authors exploring the links between trade liberalization and communicable disease. Authors emphasize the role of transnational tobacco companies in advocating for further liberalization policies and highlight differences in consumption patterns between men and women.

Finally, import liberalization is noted for its role in increasing the flow of drugs, with differential impacts to be found at both the global and national level. Pharmaceutical companies are highlighted as an increasingly important source of illegal drug consumption.

Agricultural and Food Trade

Another context identified as central to the relationship between trade liberalization and health is agricultural and food trade. One of the main economic assumptions behind trade liberalization is that open markets will lower food prices and lift the incomes of agricultural producers thereby reducing poverty and hunger in developing countries. Framework authors however, provide evidence for a more critical analysis of this theory, highlighting differential impacts of open markets on consumers, farmers, corporate actors, women and the poor. In this policy area, trade liberalization is seen to impact health through three main pathways: food security, diet, and food safety.

A range of trade agreements are seen to affect food and agricultural trade, for example, the WTO Agreement on Technical Barriers to Trade (which contains rules relating to food quality standards and labelling); the Trade-Related Intellectual Property Rights Agreement (TRIPS) (which protects seed patents); the agreement on the application of Sanitary and Phytosanitary Measures (SPS) (which sets standards for trade-related measures that can be taken to protect human health); as well as various regional, and bilateral trade agreements (Rayner et al. 2007).

However, one of the most discussed agreements in reference to food and agriculture trade is the 1994, pre-WTO Agreement on Agriculture (AOA). This agreement was enacted with the purpose of leveling the playing field of agricultural trade by requiring governments to eliminate quantitative import restrictions, lower

agricultural tariffs, reduce domestic support and eliminate export subsidies (Leowenson, 2010). Whether the agreement has helped or hindered the elimination of poverty and hunger in developing countries, and whether further negotiations will improve or further compromise the attainment of these objectives in poor countries is however, hotly debated (Diaz-Bonilla et al., 2002).

An oft cited concern is that despite the rhetoric of a level playing field, industrialized countries continue to protect their agricultural producers while developing countries face increasing pressure to further liberalize imports. This is argued to limit the market opportunities for developing countries' exports, thereby reducing their economic output and productivity. It is also seen to negatively affect the livelihoods of agricultural producers in developing countries who must compete with cheap imports (Labonté et al., 2008). Beaglehold and Yach (2003) note for example, that "US and European Union (EU) agricultural subsidies limit competition from primary producers of fresh produce in developing countries and seriously reduce these countries' national incomes" (p. 904). This reduction in developing countries' national incomes is seen to indirectly increase their risk of non-communicable disease epidemics through "changes in household income, government expenditure, the exchange rate, and prices" (p. 904).

While there is strong consensus that the loss in market access for developing countries is substantial, framework authors also acknowledge the complexity of the issue and highlight for instance that "no one-to-one correspondence exists between the value of subsidies, on OECD's definition, and income lost by agricultural producers outside OECD" (Labonté & Schrecker, 2006). Both Koivusalo (2006) and Loewenson and colleagues (2010) further highlight that if agricultural subsidies are reduced in the developed world, the benefits for agricultural exporters in developing countries will largely accrue to large transnational producers, especially since small producers have less access to "capital investments in technology, and other measures that increase output and lower prices" (Koivusalo, 2006, p. 17).

Koivusalo (2006) additionally highlights that if industrialized countries reduced their agricultural domestic support subsidies, impacts would "differ between different groups of developing countries, with the least developed countries benefiting the least" and middle income countries in Latin-America and Asia, benefiting the most (p. 17). This is because low income countries are largely net importers of food and would be negatively affected by any increase in food prices.

Koivusalo supports this position by drawing on an analysis by the Food and Agricultural Organization which shows that of the 46 least developed countries, 31 are net importers of agricultural products.

Beyond the impacts of agricultural trade liberalization in developed countries, framework authors discuss the differential impacts of agricultural and food liberalization policies via food security, diets and food safety. The next three sections will discuss these areas in detail.

Food Security

While it is acknowledged that overall global food security improved between 1960 and 2000, framework authors note that this achievement masks important regional differences such as increasing food insecurity in Sub-Saharan Africa where the number of malnourished children under the age of five increased by 14 million between 1970 and 1997 (Diaz-Bonilla et al., 2002). It is also highlighted that while overall food security has increased, the proportional rate of decline in undernourished children and adults in the world has been slow and even reversed since 2000 (Labtöne et al., 2007).

Labonté and colleagues (2007) note that there is little evidence to assess the impact of trade liberalization on food security, however, the authors highlight a study by the United Nations Food and Agricultural Organization which examined the impact of economic reforms on food security in fifteen small and developing countries. This study found that “trade reform can be damaging to food security in the short to medium term if it is introduced without a policy package designed to offset the negative effects of liberalization” (United Nations Food and Agriculture Organization (2006, p. 75), cited in Labonté and colleagues (2007, p. 45). Researchers conducting this study highlight the following as instruments of reform, many of which can be considered as central aspects of trade liberalization:

- 1) exchange rate regime liberalization;
- 2) foreign exchange liberalization: elimination of restrictions on foreign exchange earnings;
- 3) tariffication of quantitative restrictions on imports and removal or reduction of import licensing requirements;
- 4) lowering of tariffs and reduction of their dispersion;
- 5) reduction or elimination of the use of export prohibitions, licensing

- requirements and other export restrictions;
- 6) reductions of export taxes and surcharges;
 - 7) loosening of controls on interest rates and, generally, an increase in real lending rates. Financial sector reform has often been accompanied by a widening of financial intermediation margins;
 - 8) reducing the rate of expansion of the money supply through instruments of monetary policy;
 - 9) increasing the government's revenue base, strengthening tax collection efforts, and raising tax rates, especially tariffs on public services;
 - 10) reducing real government outlays.

More specifically, liberalized international food and agricultural markets are related to greater food insecurity in developing countries via instabilities in global food prices (Labonté et al., 2008). In this sense, trade liberalization is thus conceptualized as greater market integration. The authors highlight that between 1995 and 1996 “developing countries faced an average 40 percent increase in their food import bills, due to poor harvests, demand in China, and the dramatic drop in food aid levels as US surpluses were absorbed in commercial markets” (p. 45). Mendonza (2009) however, notes that increased consumption subsidies, along with import liberalization strategies, can temper the negative impact of food price shocks.

De Vogli and Birbeck (2005) cite evidence which shows how the removal of food subsidies may negatively impact access to food, as well as increase women and children's exposure to HIV/AIDs. The authors highlight for example, that “in Zambia, after the removal of subsidies in 1985, the price of maize meal rose by 50%. In Zimbabwe, after eliminating food subsidies, the cost of living for lower-income urban families rose by 45% between mid-1991 and mid-1992” (p. 111). Increases in food prices are not only noted for making the accessibility of food more difficult, but also for reducing the amount of money families have available for other basic commodities.

The authors highlight that as the primary providers of meals, women in Sub-Saharan Africa bear the majority of this burden. Urban women in particular are seen as disproportionately impacted by these policies since the majority of their food is purchased rather than produced. Rural women are also seen to experience largely negative impacts from these policies as they “barely cover their subsistence with the food they produce, and with the increasing cost of food they can no longer afford to

purchase other foods" (De Vogli & Birbeck, 2005, p. 111).

With less money for food and basic commodities, De Vogli and Birbeck highlight that women often rely on commercial sex as a survival strategy. This increases women's exposure to sexually transmitted diseases and sexual abuse. It also increases the vulnerability of infants to HIV/AIDS, and predisposes children of poor mothers to HIV by forcing them to abandon school in search of work. It is noted that children in impoverished families are likely to be abandoned and often find themselves living and working on the street, "where they may be forced into prostitution to exchange sex for money, goods, food or shelter" (De Vogli & Birbeck 2005, p. 111).

Finally, Labonté and colleagues (2007) relate the liberalization of agricultural export markets in developing countries to food insecurity at the household level. The authors highlight research done by the International Food Policy Research Institute in the 1980s. This research "examined the nutritional impact of a series of cash cropping schemes in ten developing countries" (p. 45). Without explicating the particular liberalizing policies that promoted these schemes, the authors note that "the findings suggested that cash cropping generally results in higher incomes and spending on food, but has relatively small impact on energy intake, and in most cases, little or no impact on childhood malnutrition" (p. 45). This study also illustrates how the concept of food security should take into account nutritional adequacy. Nutrition is discussed in greater detail in the next section.

Nutrition

Globalization is argued to have brought about changes in the "quantity, type, cost and desirability of foods available for consumption", altering both consumption patterns and nutritional outcomes (Hawkes, 2006, p. 2). This section will explore the pathways presented by framework authors which highlight trade liberalization's role in these processes.

Within the agricultural and food trade literature, framework authors focus on what is termed the 'nutrition transition' to explain much of the relationship between trade liberalization and poor nutritional outcomes. Coined by Popkin (1998), the nutrition transition can be understood as the shift from traditional staples, such as cereals and complex carbohydrates, to more energy dense foods and refined carbohydrates. Increased consumption of foods outside the home also characterizes

this transition. Rayner and colleagues (2007) additionally highlight that “[t]here may be a case for unbundling the nutrition transition from one single process into three, namely diet, the physical environment and culture, recognizing that each of these transitions overlap, combine and amplify each to the other” (p. 70).

The most commonly identified pathways linking the trade liberalization to the nutrition transition are, the increasing reliance of countries on food imports and the rise of transnational food companies. While the former is seen to be a result of various import and export liberalizing strategies, the latter is largely seen to be a result of various FDI liberalizing policies. The nutrition transition is noted for its differential impacts across low, middle, and high income countries as described below.

In developing countries, Rayner and colleagues (2007) highlight the dual burden of continuing malnutrition and simultaneous rises in diet-related chronic diseases. Trade liberalization is seen to affect the food supply chain in developing countries “at varying levels of complexity that can be characterized as follows: food imports and exports, the local/global balance of the internal dynamics of the food supply chain, FDI in food processing and retail and commercial promotion of food” (Rayner et al., p. 70). Without identifying specific liberalizing policies, these factors are in turn related to an increased reliance on food imports; a shift from local to ‘value added’ processed foods; an increased availability of highly processed foods through FDI and supermarket enlargement; and a shift in cultural expectations via advertising. The need for stronger food governance is emphasized.

Thow (2009) provides one of the most comprehensive understandings of trade liberalization’s impact on the nutrition transition. Through a systematic review of nutrition and liberalization related literature, the author uses a range of WTO agreements to outline three broad policy areas through which trade liberalization may impact diets and the nutritional transition in developing countries: trade in goods; trade in investment and trade in services and support/protection for domestic production and industry.

Within the trade in goods pathways, both import facilitation and export promotion policies are identified as primary determinants of health related to trade liberalization. Under import facilitation, WTO agreements are emphasized for their role in liberalizing trade in goods through the reduction of both tariff and non-tariff barriers to trade. Highlighted examples of non-tariff barriers to trade include

“quantitative restrictions, import licensing, variable levies, import quotas, and technical barriers” (p. 2153). GATT is identified as the key agreement within this pathway since the schedule of commitments attached to it indicates when countries will reduce their tariffs and by how much. The SPS and TBT agreements are also identified for their role in committing countries to remove “restrictions and import regulations that are disguised protectionist measures” (p. 2151). Finally, the Most Favoured Nation (MFN) principle is highlighted for dictating that “all nations should be given equal treatment, meaning that countries cannot use trade barriers to discriminate based on the source of imports” (p. 2152).

Thow highlights two key implications of the removal of barriers to food imports: firstly, an increase in food imports, and secondly, a decrease in the costs of importing food, and thus increased competition between imported and locally produced food.

According to Thow, increases in food imports have meant a shift in countries' food cultures through the increased availability of both processed and high value goods, such as fruit and dairy products. Additionally, the availability and low cost of animal feed, “(in many cases, from developed countries with subsidised production)”, has meant greater consumption of meat products (p. 2151). While Thow emphasizes the positive effects this has had in areas with problems of undernutrition, the negative implications this can have in countries where undernutrition is not a concern, are also highlighted. Thow also associates increased openness in food markets with a 'dumping' of low quality foods in developing countries. Finally, the decreased costs of imported food, especially processed foods, and increased competition from local food providers, is seen to increase the consumption of unhealthy, refined foods.

Thow highlights that “export promotion is also an important component of trade liberalisation” (p. 2153). While the various forms of support that the author relates to trade liberalization aren't explicated, the International Trade Centre is highlighted as a major promoter of export promotion policies. The promotion of export industries is seen to be associated with an increase in land usage for cash crops (crops for export) in developing countries, resulting in less production and consumption of traditional domestic staples.

Currency devaluation is also highlighted as a trade liberalizing strategy and seen to promote export industries by decreasing the costs of goods for purchasing

countries. It is noted that this strategy may increase the costs of imported goods and both negative and positive diet-related implications of this process are highlighted. Negatively, increases in the cost of food can result in reduced food consumption and dietary diversity. On the other hand, “if domestic production has the capacity to respond, currency devaluation can have positive dietary effects through increasing the availability and consumption of locally produced goods” (p. 2154).

Next, Thow relates trade liberalization to investment and trade in services on the basis that “policies associated with trade liberalization also act to encourage investment, as a means to economic growth” (p. 2154). In this pathway, Thow highlights three agreements for their roles in promoting investment and trade in services through trade-liberalizing policies:

- GATS, “which includes changes in regulations such as reductions in restrictions on foreign ownership of companies”,
- TRIPS which enhances related regulatory change via protection of intellectual property rights, and
- TRIMs which “contains commitments to remove any restrictions on where companies source their inputs (e.g. domestically rather than from imports)” (p. 2154).

Policies related to these agreements are seen to effect food systems by increasing food industry investment, increasing competition, increasing the development of food technology (and technology transfer), creating more new foods and food service establishments, and increasing food marketing. These food system effects in turn, are seen to increase the availability of processed foods, stimulate the local industry, improve food storage and safety, and increase the availability and awareness of “high profit margin novel foods” (p. 2152). These mechanisms are then described as increasing people’s consumption of processed, refined and pre-prepared foods.

In Thow’s final pathway, the removal of farmer subsidies and the removal of import tariffs on goods that are also produced locally are highlighted as key aspects of trade liberalization. Agreements identified to be associated with these policies are the AOA, under which “developing countries agreed to cut subsidies by 13%”, the Agreement on Subsidies and Countervailing Measures which regulates the use of subsidies and prohibited subsidies (“those that are attached to conditions such as the use of domestic materials by industry”), and the SPS and TBT which also address the

conditions under which subsidies can be used as a form of protection for local production and industry (p. 2155).

Since the impact of tariff reductions on food consumption is previously addressed, the removal of subsidies is the focus of this pathway. First, the elimination of prohibited subsidies is seen to reduce the overall cost of processed foods, and increase the attractiveness of investment into the food industry, “thus magnifying the effects of investment-related measures discussed earlier” (p. 2155).

The impact of the removal of agricultural subsidies is seen to vary across countries. The removal of agricultural subsidies in the developed world for instance, may increase the cost of imported goods elsewhere. However, the removal of these subsidies, combined with supplementary trade measures, might reduce the problem of low priced goods being ‘dumped’ on developing country markets. Subsidy reduction might also impact food availability in developing countries by removing incentives for production. The author notes however that “there is little available literature on the outcome of such policy changes for diet” (p. 2155).

Using the concepts of ‘dietary convergence’ and ‘dietary adaptation’, Hawkes (2006) explores how global market integration influences dietary patterns in middle income countries. Hawkes adopts definitions of these concepts from Kennedy, Nantel and Shetty (2004) where dietary convergence is understood as “increased reliance on a narrow base of staple grains, increased consumption of meat and meat products, dairy products, edible oil, salt and sugar, and a lower intake of dietary fibre”, and dietary adaptation is defined as “increased consumption of brand-name processed and store-bought food, an increased number of meals eaten outside the home and consumer behaviours driven by the appeal of new foods available” (Kennedy, Nantel, & Shetty, 2004, p. 9 cited by Hawkes, 2006, p. 3).

Three processes are highlighted for their role in facilitating dietary convergence and adaptation: “(I) *the production and exchange of goods* in the form of agricultural production and trade; (II) *the flow of investment across borders* in the form of foreign direct investment in food processing and retailing; and (III) the global communication of “information” in the form of the promotional food marketing” (p. 3). A noteworthy strength of this framework is that each of these processes is supported with evidence from case studies.

Within *the production and exchange of goods* pathway, trade liberalization is understood as increased ‘market-orientation’. Increases in market-orientation are seen

to have occurred in middle income countries within the context of structural adjustment, through regional and bilateral trade agreements, as well as through GATT and the AOA. Increased market-orientation in general is seen to have increased flows of food trade, foreign investment and the size of transnational food companies. These processes are in turn noted to “have altered the supply of foods associated with the nutrition transition” (p. 3). The integration of vegetable oil into Brazilian, Chinese and Indian markets is explored and used to exemplify the author’s claims. In this case study, liberalization policies in Brazil, such as lowered import tariffs and export taxes, in combination with investment liberalization and currency devaluation, are noted for their role in the convergence of vegetable oil consumption in China and India.

Rather than being seen as a component of trade liberalization, increased *flows of investments across borders*, is conceptualized as a globalization process, related to but distinct from trade liberalization. However, within *the global communication of “information* pathway, trade liberalization might be understood as the opening of the communications market, which is seen to occur “due to some domestic deregulation and trade agreements” (p. 10). Along with various other incentives, the opening of the communications market is identified as driving the globalization of food marketing which is in turn highlighted for its role in promoting energy-dense and highly-processed foods, encouraging both greater consumption and production of these products.

Hawke uses Thailand as a case study to explore processes in this pathway and highlights the Thai advertising and promotions industry for its dynamism, which is seen as “both related to the country’s tradition of openness to trade and investment” (p. 10) Foreign ownership of advertising agencies in Thailand, for example, is described as unrestricted and advertising campaigns as only somewhat regulated. An increased presence of foreign brands is seen to have been facilitated through free trade agreements and created the need for product differentiation through advertising. This market openness is then related to the dietary convergence of “processed savoury and sweet snacks” (p. 10).

Turning to high income countries, Smith and Signal (2009) highlight how the nutrition transition taking place in low and middle income countries has increased global dairy demand. This is associated with increasing costs of dairy products and negative nutritional health outcomes in New Zealand. While it is acknowledged this

trend has had positive impacts on New Zealand's dairy exporting farmers and producers, and thus positive impacts on the national economy, these advantages have come at the expense of local consumers, "especially those which are socioeconomically disadvantaged" (p. 2).

Trade liberalization is conceptualized broadly by drawing on the notions of market-orientation and openness. Reform measures associated with it are the "removal of government subsidies, reduction of import tariff and non-tariff barriers, removal of control on interest rates, wages and prices, restructuring and sale of government assets and reform of tax structures including the application of a neutral good and services tax" (p. 3). Drawing on Woodward and colleagues' (2001) globalization and health framework, the authors highlight both direct and indirect pathways between trade liberalization, and nutritional health outcomes related to diary consumption patterns. Reform measures associated with trade liberalization, in conjunction with the expansion of large supermarket chains, are seen to have increased the price of milk in New Zealand, especially relative to cheap sugar-sweetened carbonated beverages. This is in turn directly related to greater nutritional health inequalities, with lower income New Zealanders more likely to choose cheaper, nutritionally poor beverages. Changes in milk supply and limited purchasing points for milk are also associated with the identified reform measures but indirectly related to nutritional health inequalities via national and household economies.

Food Safety

Trade liberalization is broadly related to food safety concerns through increased flows of food products and via food safety standards. Increased flows of food are highlighted for increasing the susceptibility of developed countries to dangers of food-borne illnesses. More uniform safety standards are seen as a mechanism combating this threat. However, these standards are also seen as hindering the exporting capacities of developing countries and especially the poor, since they often lack the institutions and infrastructure necessary for compliance (Diaz-Bonilla et al., 2002).

Summary

In the context of agricultural and food trade, framework authors challenge the assumption that trade liberalization improves health through the reduction of food prices and by lifting the incomes of agricultural producers. They do this first by

demonstrating how further reduction of agricultural subsidies in developed countries may come at the expense of consumers in lower income countries in the form of higher food prices. While it might be argued that the gains in market access for agricultural producers outweigh the costs of increased food prices, framework authors demonstrate the difficulty in making this claim given that the beneficiaries of such reductions are expected to be large transnational companies.

In terms of food security, framework authors highlight that improvements over the past three decades have been slow and in some regions reversed. While import liberalization may lower food prices, food security may be hindered by instabilities in global food prices and through the reduction of consumption subsidies. Reduction in consumption subsidies also impacts how much money families have available for other basic commodities and disproportionately impacts women who may turn to commercial sex as a survival strategy, placing themselves and their children at risk of sexual abuse, sexually transmitted diseases and HIV/AIDS. Furthermore, despite reductions in food prices, framework authors highlight the negative impacts trade liberalization has on health by shifting the type and quality of food available to people with the poor suffering the greatest. Finally, food and agricultural trade liberalization also impacts health outside of food prices and agricultural wages through increased trade flows and related food safety concerns.

Structural adjustment policies

Another key context through which framework authors discuss the health impacts of trade liberalization is structural adjustment policies. Structural adjustment policies are discussed in reference to loan conditionalities imposed by either the IMF or World Bank and often in reference to neoliberal ideology and the Washington Consensus. Both Labonté and colleagues (2007) and Labonté and Schrecker (2006) acknowledge the similarities between adjustment policies and Poverty Reduction Strategy Papers which emerged in 1999 as a new requirement for countries to receive grants or loans from the World Bank or other development agencies. Framework authors however, have yet to explore their impact on health with reference to trade liberalization.

Trade liberalization is universally seen as a fundamental aspect of structural adjustment policies, along with financial liberalization, government spending

reductions and various privatization and macroeconomic stability policies.

Many framework authors highlight the difficulty in linking structural adjustment policies to health. One reason is because these policies are undertaken in countries already in distress, making it difficult to know to what degree factors outside of conditionalities are responsible for health outcomes. Stuckler and Basu (2009) for example, highlight government corruption as one factor outside of structural adjustment policies that might play a role in influencing health outcomes. Labonté and Schrecker (2006) as well as Cheru (2002) additionally highlight the difficulty in separating the specific impacts of adjustment policies from those of market and globalization pressures in general. It is noted however, that if we are interested in knowing how market forces impact health, it is less important to be able to attribute how much of a policy is due to adjustment in particular, and how much to market forces in general (Labonté & Schrecker, 2006).

Perhaps more relevant to the purposes of this review is the difficulty in separating the impacts across the range of policies adopted under adjustment (Labonté & Schrecker, 2006). This task becomes even more challenging when we consider that effects of policies are often “indirect, acting through policy channels such as privatization, liberalization, and stabilization, for which global health evidence has been growing but is generally lacking (Stuckler & Basu, 2009, p. 774).

Despite these difficulties, studies have attempted to assess the impacts of adjustment, though few have done so by isolating the health impacts of trade liberalization. In terms of general health impacts Cheru (2002) highlights that while some countries have witnessed growth in the context of adjustment, few have seen it sustained. Meier (2006) elaborates on this by highlighting that states experiencing growth “have often done so at the expense of widening inequality within societies among the most poor and vulnerable” (p. 720).

Framework authors Stuckler and Basu (2009) review the evidence linking IMF imposed adjustment to global health and find no evidence of positive health effects. While they do find some evidence for neutral effects, most of the effects are found to be largely negative (Stuckler & Basu, 2009). Other framework authors relate adjustment policies in general to: the deterioration of public goods for health (Fox & Meier, 2009); weakened health care systems (Stuckler & Basu, 2009); “Impeded efforts to control tobacco, infectious diseases, and child and maternal mortality” (Stuckler & Basu, 2009 p. 771); cuts in health budgets and the imposition

of user fees in education and health services (Cheru, 2002; Yaşar, 2010); increased poverty and income inequality (Labonté & Schrecker, 2006; Yaşar, 2010); increased rates of sexually transmitted diseases (Meier, 2006; Yaşar 2010); worsening nutritional outcomes (Cheru, 2002; Labonté & Schrecker 2006, Meier, 2006;); and increases in unemployment and deteriorating living conditions (Labonté & Schrecker, 2006; Meier, 2006).

Few framework authors highlight the isolated health impact of trade liberalization in the context of adjustment policies. However, both Cheru (2002) and Labonté and Schrecker (2006) relate structural adjustment to reductions in consumption subsidies. Cheru (2002) associates these reductions with reductions in the realization of the right to food and Labonté and Schrecker (2006) note negative impacts in terms of nutrition and household income.

In exploring the impact of adjustment policies on the vulnerability of women and children in Sub-Saharan Africa to HIV/AIDS, De Vogli and Birbeck (2005) provide the most comprehensive conceptualization how trade liberalization polices, within the context of adjustment, impact health.

The authors' framework is composed of five different pathways. Of these, the first and the third incorporate elements of trade liberalization. The five pathways are 1) currency devaluation and the removal of food subsidies; 2) privatization; 3) financial liberalization and trade liberalization; 4) user-fees for health services; and 5) user-fees for education.

The first pathway, currency devaluation and the removal of food subsidies, is illustrated in figure 13. As discussed previously, in this pathway, the removal of food subsidies has a largely negative effect on the prices of basic items such as food, housing and transportation. This comes largely at the expense of women who are responsible for ensuring the provision of food and basic commodities. The authors note that impoverished women are forced to adopt risky survival strategies in an attempt to acquire these goods, often through commercial sex market. Impoverished women and children are also more susceptible to non-consensual sex and domestic violence.

In the third pathway, illustrated in figure 14, trade liberalization, in conjunction with the largely negative impacts of financial liberalization, is seen to have mixed effects on the production capabilities of small farmers. Subsidy reform is highlighted as having mostly negative impacts on the production of small farmers by

weakening their economic activity. It is noted for example that in Ghana, “[f]ertilizer reform that involved the removal of subsidies increased the price of insecticides, fungicides, and spraying machines make these inputs unaffordable for most small farmers” (p. 113). Trade liberalization is also noted to have potentially positive health impacts through import liberalization and export promotion policies which “may reduce imbalances in the import-export ratio resulting in economic growth and reduced poverty” (p. 113).

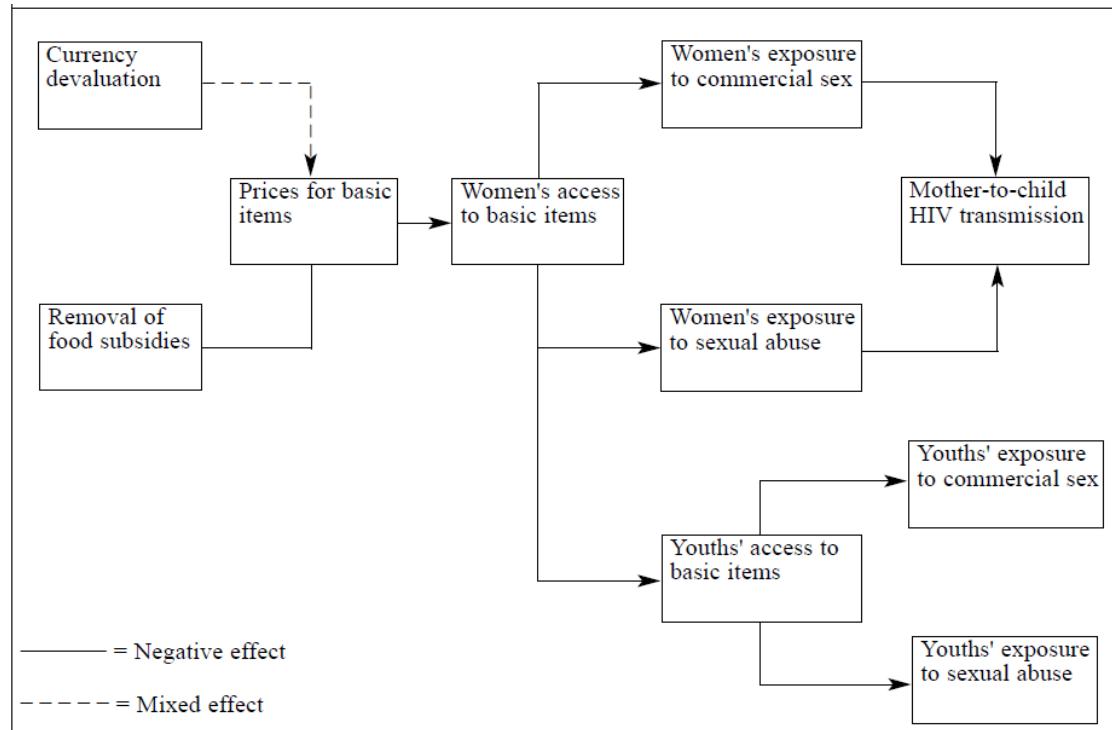


Figure 13 Potential Impact of Adjustment Policies on Vulnerability of Women and Children to HIV/AIDS in Sub-Saharan Africa (De Vogli & Birbeck 2005)

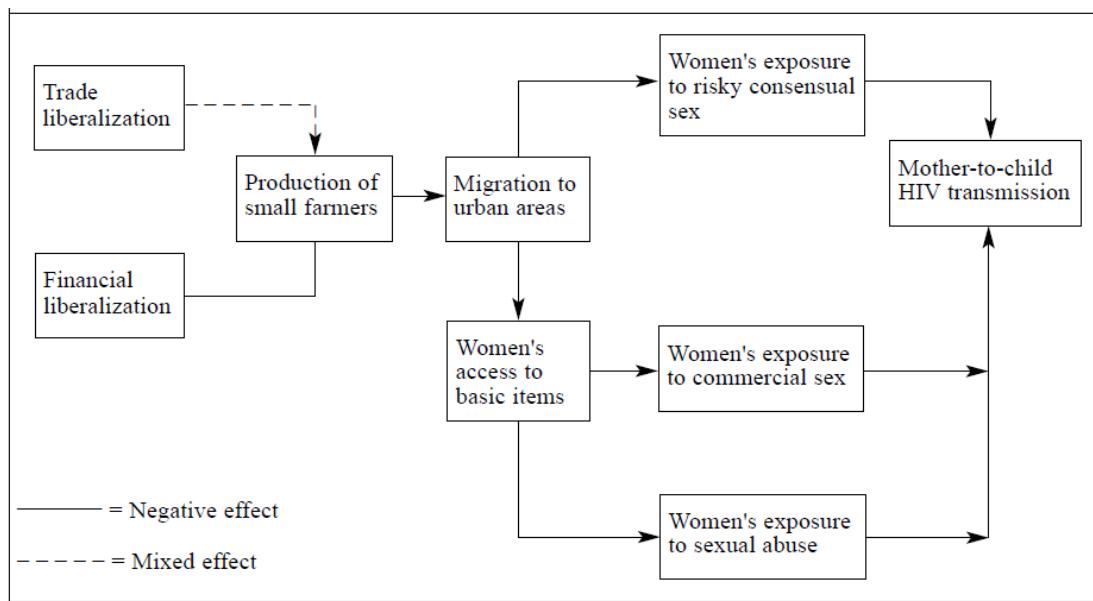


Figure 14 Potential Impact of Adjustment Policies on Vulnerability of Women and Children to HIV/AIDS in Sub-Saharan Africa (De Vogli & Birbeck 2005)

When the production of small farmers declines, often due to displacement by large-scale producers, migration of males in search of employment to urban areas is seen to increase. A handful of studies are drawn on which suggest that migrant men are more likely to engage in risky sexual behavior. This in turn is seen to increase the risk of women's exposure to HIV/AIDS given they "are often unaware of the HIV-related risks involved in consensual unsafe sex when their partners return home" (p. 114). Moreover, due to their financial dependency, it is also noted that women may have little power to negotiate safe sex, and be at increased risk of domestic violence and physical abuse. Finally, women abandoned by their migrating partners may enter the commercial sex market as a survival strategy, increasing their exposure to sexual transmitted disease.

Summary

It is widely acknowledged that trade liberalization is a fundamental aspect of adjustment policies, although the relationship between trade liberalization and PRSPs is less explored. Attempts at linking adjustment policies to health are rife with difficulties, especially when trying to separate the impacts of trade liberalization from other adjustment related policies.

It is also acknowledged that while structural adjustment policies in general may lead to growth, sustainability of this growth is uncertain, moreover, increases in growth have often been accompanied by increases in income inequality. While adjustment policies in general are related to a range of health concerns, only a few

framework authors isolate specific trade liberalizing policies within the context of adjustment and health. Among those that do, reductions in consumption subsidies are a shared concern. Such reductions are related to matters of food accessibility, nutrition, household income, and women and children's vulnerability to HIV/AIDS. It is also recognized that trade liberalization may have a positive impact on health when import liberalization and export promotion policies reduce imbalances in the import-export ratio and thereby increase growth and reduce poverty.

Labour Markets

Descriptions of trade liberalization's impact on health through its influence on labour markets vary in complexity based on the intention of the framework.

Drawing on the work done by the Globalization Knowledge Network of the WHO CSDOH, Labonté and colleagues (2007) provide a broad description of the relationship between labour markets, trade liberalization and health equity. The authors note that the “reorganization of production and service provision across multiple national borders by transnational corporations” is a central element of globalization made possible by trade liberalization (p. 3). However, the mechanisms through which trade liberalization supports these changes is not delineated.

The authors highlight three related issues identified in recent globalization and labour market literature. First, that “a genuinely global labour market is gradually emerging, driven in part by the integration of India, China, and the former transition economies into the global marketplace” (p. 3). Second, that “the need to appear ‘business-friendly’ may limit governments’ ability to adopt and implement labour standards, health and safety regulations, and other redistributive social policy measures” (p. 3). Finally that “production is being fragmented and reorganized across multiple national borders in global commodity chains or value chains, in which each element of production is located where it contributes most to overall returns while reducing financial risks” (p. 4).

The health consequences of these processes are seen to be related to: “growing economic and social inequalities among workers; falling wages and deteriorating working conditions for many or most workers; eventual loss of some jobs to jurisdictions, notably China, which can offer even lower labour costs; increased workplace hazards and industrial pollution exposure to which is in turn related to labour market position” (p. 4).

The authors note that these consequences are not just the result of economic integration, and that distributions of gains and losses depend on ability of workers, firms and national economic policies to carve out niches in global value chains. It is also noted that the winners are typically those with “access to the necessary financial resources, skills (‘human capital’), and technology” (p. 4).

In this framework, the reorganization of labour markets is also seen to disproportionately impact women. A study by the United Nations Research Institute for Social Development is presented to have found that women’s work in export industries can increase their income and entitlement to benefits; however, the authors note that these gains are also more vulnerable to economic crises and to labour market flexibility pressures.

Another broad framework is presented by Muntaner and colleagues (2010). This framework draws on work done by the Employment and Working Conditions Knowledge Network of the WHO CSDOH and outlines “the mechanisms leading from globalization and related macro-scale social process to health inequalities by way of employment conditions” (p. 57). Two flow charts are used to illustrate the overarching conceptual framework, one at the macro-level and one at the micro-level (see figures 15 and 16 respectively).

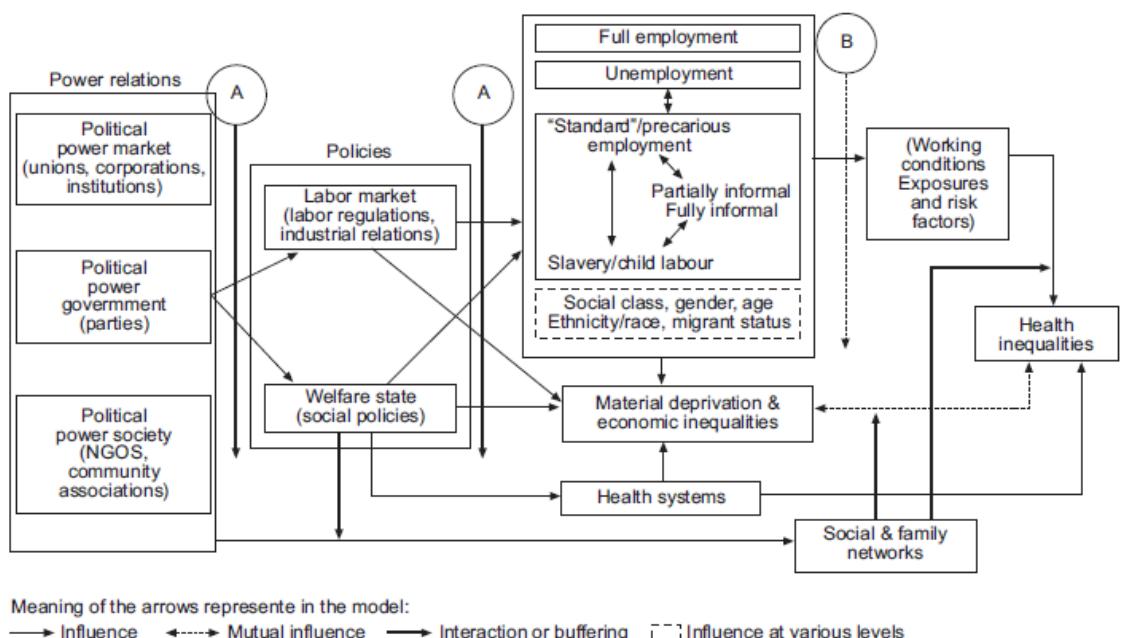


Figure 15 Macro-level framework and policy entry points (Muntaner et al. 2010)

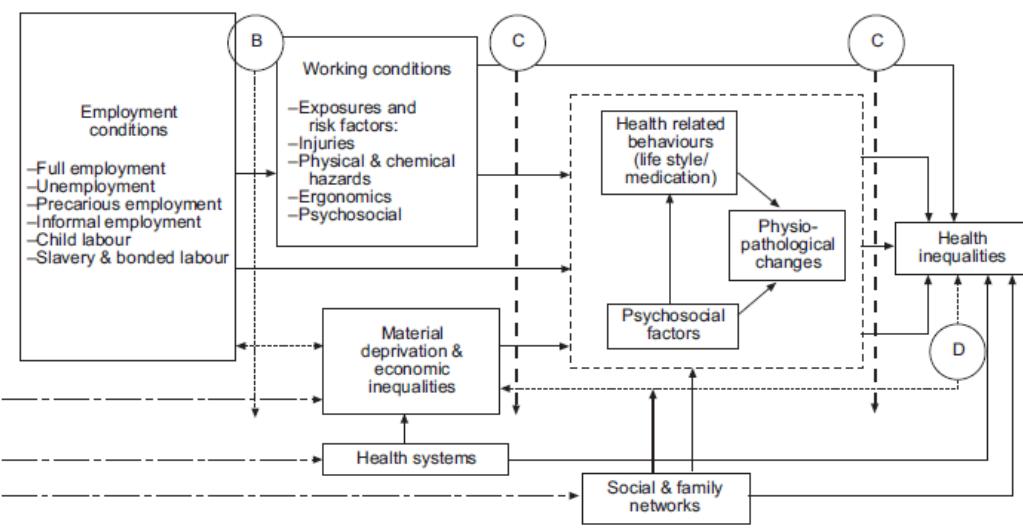


Figure 16 Micro-level framework and policy entry points (Muntaner et al. 2010)

Within the micro-level, the authors provide a comprehensive analysis of the pathways “between employment conditions and health inequalities through a number of behavioural, psychosocial, and physiopathological pathways” (Benach et al., 2007, p. 32). At this level, four main categories of risk exposure (physical, chemical, ergonomic, and psychosocial) are seen to be mediated by social mechanisms and influenced by six different types of employment conditions (full employment, unemployment, precarious employment, informal employment, child labour, and slavery & bonded labour).

At the macro-level, the framework seeks to contextualize employment relations by illustrating the role of power relations in influencing both labour market and welfare state policies. In the final report of EMCONET to the WHO CSDOH (Benach et al., 2007), a historical account of the macro-level context is given. The authors note that “[k]ey influences affecting changes to employment dimensions over the past thirty years have been the growing influence of powerful corporations and abandonment of Keynesian economic policy and social compacts in favour of neo-liberalism” (p. 102). Further, the authors note that “[p]olicies and practices flowing from the belief that competitive markets deliver the best outcomes include rejecting public spending as a method of managing unemployment rates; removing barriers to trade, commerce and competition; tax cuts; privatization; corporatism; competitive tendering; outsourcing/off-shoring; downsizing; and (more rhetorically than in practice) small government” (p. 102).

It is acknowledged that in wealthy countries these policies and practices have resulted in “a reduced welfare net for the unemployed and disadvantaged; job losses in the public sector; growth in job insecurity and precarious employment; a weakening (in practice) of regulatory protections; and the historical re-emergence of an informal economy, including home-based work and some child labour” (p. 102). It is noted that

“[i]n poor countries the dominance of neoliberalism has translated into a new model of economic development oriented toward productivity and supplying products to global markets (including “race to the bottom” working conditions to attract overseas capital and the use of corporate-friendly low regulatory special export zones) irrespective of the effects on local communities, such as decreased domestic food production, rural dislocation, and social instability” (p. 102).

On the basis of this account, trade liberalization can be understood as part of the macro-economic environment shaping labour markets, welfare states, and employment relations, though specific mechanisms through which this occurs are not explored. Trade liberalization is also not conceptualized in relation to power relations, which occupies the crux of the macroeconomic environment. However, the authors do characterize export processing zones (EPZs) on the basis of their “relentless hostility to trade unions” which demonstrates one pathway through which trade liberalizing strategies impact the domain of power relations (p. 50).

Other framework authors help to provide a more comprehensive conceptualization of trade liberalization in relation to labour markets and health.

Corrigall and colleagues (2008) for example, explore the relationship between global trade and mental health. Like Muntaner and colleagues (2010), the authors highlight the role of work-stress in mediating a range of health outcomes including depression, aggression, unhealthy lifestyle habits, alcohol abuse and musculoskeletal disorders. Trade liberalization is seen as part of the Washington Consensus, and “a key principle of WTO agreements” which seeks to “ensure that trade is not unnecessarily restricted by tariff or non-tariff barriers” (p. 336). Whereas tariff barriers are understood as those which restrict trade through financial methods, such as import taxes, non-tariff barriers are seen to be those which “refer to laws and regulations that affect trade such as those based on a threat to public health” (p. 336).

The authors relate the opening of national economies in general to changes in the nature of the working environment both in industrialized countries and middle- to low-income countries. In industrialized countries, impacts are characterized by job losses, whereas in middle to low income countries, impacts are characterized by the increased global supply of unskilled labour, the depression of wages, and decreases in the quality of work. The authors note that while the specific impacts of trade policies or agreements are hard to quantify, “evidence indicates job demands have increased while job control has decreased and workers are exposed to a greater number of occupational hazards” (p. 345). In middle- to low-income countries these problems are noted to be exacerbated by weak monitoring and regulatory enforcement capacities, as well as by “weakly organized labour movements and the overriding need for economic growth” (p. 436). It is also noted that those most likely to work in the informal sector, and therefore be exposed to greater occupational risks and job insecurity, are women and children.

On the other hand, Loewenson (2001) highlights that globalization has largely benefited industrialized countries, however, the author is more aligned with Corrigal and colleagues (2008) in noting that the greatest burdens have fallen on those in middle- to low-income countries. The author highlights that “[f]or the large majority of workers in the less-industrialized countries, liberalized trade has been accompanied by transfer of obsolete and hazardous technologies, chemicals, process and wastes, including asbestos and pesticides no longer produced or used in industrialized countries” (p. 864). Health is therefore seen to be impacted through a range of physical, chemical, and psychosocial influences such as “mechanical, electrical and physical hazards”, environmental pollution, and psychological stress (p. 864).

Again similar to Corrigall and colleagues (2008), the author notes that trade liberalization “has also been associated with an increase in assembly line, low-quality jobs, with minimal options for advancement, and a growth of insecure, casual employment in a small-scale informal sector” (p. 864). Social protection, as a system for protecting workers’ is noted to be rarely provided by these types of employment shifting the “liability for working conditions to the worker” (p. 864).

Trade “liberalization is also associated with deregulation of production laws, adding to pressures on occupational health standards” (p. 866). EPZs are highlighted as an example of how health is impacted “under liberalized tax and trade regimes”

(p. 864) and is the only example of how a specific trade liberalizing policy influences health. The authors note that in some EPZs occupational health laws do not apply, breach of laws are penalized at “absurdly low levels” and criminal sanctions rarely evoked (p. 865).

Furthermore, both women and migrant workers are acknowledged to be disproportionately impacted by labour market changes. While new production patterns are seen to have increased women’s participation in the labour force, with increased income generating opportunities, women are also noted to work more often than men in insecure employment and have less access to important resources such as “credit, land, services training, and other production inputs” (p. 864). They are also noted to mostly occupy “low-skilled, low-paid jobs where rates of union membership are low” and to carry the double burden of both employment and household work (p. 864). These burdens come at the cost of increased psychological stress, decreased time for rest, and increased exposure to occupational risks.

Elaborating on Loewenson’s (2001) characterization of the impacts trade liberalization on women’s health, are the following four framework authors: Doyal (2002), Grown (2005), Yaşar (2010) and Loewenson and colleagues (2010). Most of these framework authors incorporate trade liberalizing pathways within broader frameworks of globalization; Grown (2005) however, exclusively looks at the pathways between trade liberalization and women’s reproductive health. Doyal (2002) explores the impacts of globalization on women’s health in general, Yaşar (2010) explores the impact of globalization on women’s exposure to HIV/AIDS in Cambodia, and Loewenson and colleagues (2010) explore the impact of globalization on women’s nutritional outcomes in Sub-Saharan Africa.

Except for Grown, these authors neglect to explicitly define trade liberalization and instead appeal to ideas of ‘free trade’, ‘free markets’, ‘greater integration’, etc. Providing a more comprehensive understanding of trade liberalization, Grown (2005) highlights that “[t]rade liberalization can occur through an autonomous decision of a government to remove or reduce barrier to exports, eliminate subsidies to domestic industries and firms, and privatize goods and services, all of which are intended to result in the freer movement of capital, goods, and labor across borders” (p. 29). Grown also highlights that “trade liberalization more commonly occurs as a result of multilateral trade negotiations of the World Trade Organization, through regional or bilateral trade agreements, or via conditions

attached to IMF or World Bank loans” (p. 29). This latter contextualization of trade liberalization is shared by the other authors, who also emphasize the particular roles of neoliberalism and corporate power in shaping negotiations and agreements.

All of these framework authors acknowledge that women’s employment has increased as a result of globalization. Grown (2005), however is the only one to note trade liberalization’s specific role in this trend and distinguishes between the growth in women’s share of employment in semi-industrialized countries, those which are agriculturally oriented, and those which are oriented toward the service sector. The author highlights that “[b]oth increased foreign investment and elimination of export tariffs have increased the demand for female labour and provided women access to manufacturing, services, and some types of agricultural employment in many countries” (p. 36). In semi-industrialized countries, women’s work has increased in export oriented industries. It is noted however, that once “these economies mature, the process of feminization of export employment may decline or even reverse” (p. 36). The promotion of cash crops as a liberalization strategy in agriculturally oriented economies is seen to have increased women’s work as “seasonal, contract workers or as labourers on husbands’ or relatives’ land” (p. 36). Finally, women are seen to constitute a large share of export workers in economies which emphasize service exports, such as informatics and tourism.

Across these frameworks, women’s health is understood to be impacted by factors both within and outside the workplace. Grown (2005) highlights four types of work environments which have different impacts on women’s reproductive health: factory employment; home-based work; sex work; and part-time and seasonal work. These categories provide a useful way of summarizing pathways to women’s health offered by other framework authors.

Factory Work

Unsurprisingly, trade liberalization is related to women’s health largely through employment in EPZs. Authors note that this type of employment can be both positive and negative for women’s health. Benefits come from women’s better access to income, and thus “increased decision making and control over household spending” (Loewenson et al., 2010, p. 11). Loewenson and colleagues (2010) additionally highlight the benefits this has on children through improved nutrition, although note that income does not always increase for workers in Sub-Saharan

Africa who are without education.

Disadvantages of factory work include job and income insecurity, as well as a lack of rights, and social benefits. Factory work can also increase food insecurity especially when work requires relocation to urban areas where women are faced with “competing demands for spending, higher costs of food purchases and limited possibilities …to produce food in urban environments” (p. 11). In terms of reproductive health, factory work is seen to put women at “greater risk of early sexual activity and sexual harassment” (Grown, 2005, p. 37).

Factory work also has important occupational and environmental health impacts through increased exposure to both “old and new hazards” (Doyal, 2002, p. 244). New hazards are associated with industry shifts towards modern technology and include for example, repetitive strain injury stemming from computer based work. Traditional hazards include “strenuous, monotonous and ergonomically unsound” work (Doyal, 2002, p. 241) as well as “high levels of machine-related accidents, dust, noise, poor ventilation, and exposure to toxic chemicals” (Grown, 2005, p. 37). These factors are also seen to increase the stress women experience, and can affect women’s reproductive health through miscarriage, pregnancy problems or poor fetal health (Grown, 2005).

Furthermore, it is important to note that women’s share of employment is not always sustained given increased capital mobility and labour market flexibility (Doyal, 2002). Yaşar (2010) for example, notes that the garment industry is the single largest employer in Cambodia but that it is under constant threat by liberalizing policies promoting international competition. Because other industries do not have the capacity to absorb any labour surplus resulting from what is described as inevitable job loss, the author warns that unemployment is likely to drive many female garment workers into the sex trade, especially when “they are not able to return to rural Cambodia, primarily because of unpaid debt and stigma (p. 14).

Home-Based Work

Home-based work is also associated with trade liberalization, although the mechanisms relating the two are never fully explored. Predominately employing women, home-based work is characterized as insecure due to a lack of formal contracts and also due to a lack of access to leave or health benefits (Grown, 2005). Women who must juggle this kind of work with childcare are seen to face additional

burdens (Doyal, 2002). In addition, the home environment itself can pose unique occupational hazards, stemming from for example, home storage of pesticides, or cooking stove pollution. Moreover home-based workers comprise an ‘invisible workforce’, which often means their needs are overlooked in the formulation of labour market or health policies (Grown, 2005, p. 38).

Sex Work

In addition to the pathways previously presented by De Vogli and Birbeck (2005), Yaşar (2010) argues that trade liberalization exacerbates inequalities and creates “an environment characterized by insecure paid employment, no safety nets, sexual harassment, landlessness, and the like” (p. 5). This environment is seen to increase women’s likelihood of entering the commercial sex market and their exposure to HIV/AIDS as well as other sexually transmitted diseases. Additionally, the growth of the service sector and tourism industry are noted by Grown (2005) to increase the demand for sex workers thereby increasing women’s risk of sexually transmitted diseases.

Part-time and Seasonal Work

Grown (2005) explores the impact of part-time and seasonal work on women’s health and notes that women working in this type of work “are often paid by the piece, receive no incomes for out of season unemployment, and are not covered by employer based health insurance plans” (p. 38). The author notes that this type of employment is found both in factory and agricultural work.

Agricultural work is less explored by Grown (2005) but considered by Loewenson and colleagues (2010) for its impact on women’s nutritional outcomes. Changes in economic trends in general are associated with “changes in support for women as farmers, in the quality and security of non-farm wage employment, and in demands on women in their household occupational roles” (p. 11). Trade liberalization’s specific role in these changes however, is not easily identifiable.

Together with changes in non-agricultural employment, these trends are seen to impact the nutritional health of women in Sub-Saharan Africa through the following pathways: “diminished access to purchased or grown food; competing time demands between food sourcing and preparation and other household activities; increased women’s (and often children’s) physical burdens and energy expenditures and exposure to disease; mental and emotional stress and neglect by women of their

own health and wellbeing; female children dropping out of school to contribute to household labour, undermining opportunities and capacities for health, and women's lack of control over finances and decision making, undermining health-promoting food choices and timely health-seeking behaviors" (p. 12).

Other Health Impacts

As Loewenson and colleagues (2010) make clear, changes in the labour market can also impact women's health, outside of their workplace. An oft-cited concern is the double-burden women face as both income earners and caretakers, increasing their emotional and physical stress. For example, Doyal (2002) notes that the increase of women in the workforce has rarely been matched by an increase of men taking on domestic responsibilities. Cornia (2001) additionally warns that if "growth in economic activity by women is not accompanied by the development of adequate child care institutions there may be an increase in injury and malnutrition among children despite a rise in family incomes" (p. 837). Labour market restructuring is also noted to have environmental impacts, such as deforestation, that are more likely to affect women due to their responsibilities in the household. Doyal (2002) notes that "[i]n parts of India, for example, deforestation means that women now have to walk many extra hours each day for a headload of firewood, while in many African communities water may be many hours away" (p. 241).

Child labour is another important, though less explored, pathway through which trade liberalization affects health in the context of labour markets. Polakoff (2007) explores the relationship between economic globalization, world poverty, child labor and health. Trade liberalization can be understood as central to economic globalization which the author defines as "the removal of barriers to free trade and the closer integration of national economies" (Siglitz, 2003 cited in Polakoff, 2007, p. 260). Regional trade agreements, as well as the WTO are noted for facilitating the removal of these barriers. Trade liberalization is also conceptualized as an 'essential ingredient' of structural adjustment which "has consistently resulted in an increase in the number of poor and exacerbated the desperate conditions of life for the majority of people in the countries on which it has been imposed" (p. 261).

Structural adjustment is related to greater world hunger, unemployment, environmental degradation, social fragmentation, and severe crises. These environments are in turn noted to have "increased exploitation of, and

dependence on, child labor” (p. 263). Economic globalization is also related to increased poverty and child labor in the global north, but it is unclear on what basis.

The author notes that in the US, child laborers can be found in the agricultural sector, given their lack of legal protection in labour standards. Figures from the United Farm Workers Union are presented which in 2000 placed the total number of child farm workers in the US at 800,000. Child farm workers’ health is impacted through “excessive and inappropriate hours of exhausting work that is performed under unhealthy and often dangerous conditions” (p. 267). Pesticide exposure is highlighted as a major risk which is linked to range of neurological and endocrine problems. Other hazards include “lack of drinking water, water for hand washing, and toilet facilities” (p. 268). Child farm workers often are paid very little, have trouble maintaining a normal school schedule, fall behind in their education, and are more likely to drop out of school altogether.

In the global south, the author explores child labour within the industrial workforce. Here trade liberalization is introduced in the context of ‘tax holidays’, which Polakoff describes as a benefit often rewarded to corporations through which they enjoy a 5 or 10 year reprieve from paying import or export duties. The author blames corporations for targeting child workers by “seek[ing] out the cheapest labor force in order to reap the greatest profit”, capital mobility for facilitating this, and also poverty for leading children into work (p. 270). Working conditions are characterized by low wages, long hours, environmental contamination, and exposure to dangerous hazards, physical abuse and criminal violence, including the trafficking of children for sex work.

Summary

In the context of labour markets, framework authors challenge the assumption that trade liberalization automatically improves health through growth in employment and income. They do this by highlighting for instance that employment is not always secure and wages extremely low, particularly in middle- to low-income countries. Additionally, framework authors identify a range of health determining factors which are related to trade liberalization and its impact on the labour market outside of employment rates and income, for instance through physical, chemical and psychosocial working conditions. Therefore, even if access to employment and income increases, benefits may be outweighed by the health costs of working

conditions. Framework authors also note burdens are likely to fall hardest on women, migrant and children workers and often identify the role of (and need for) unions in promoting healthier conditions.

Muntaner and colleagues (2010), based on the EMCONET framework (Benach et al., 2007) provide the most comprehensive framework in terms of describing how employment conditions influence health, and while the role of social policies in mediating labour market conditions and health is not entirely overlooked by other framework authors, Muntaner and colleagues are unique in their systematic incorporation of welfare state policies as a mediating link both in the relationship between the macro-political contexts and labour market policies, as well as between labour market policies and health. However, the authors fail to thoroughly account for trade liberalization's role in mediating power relations, labour market policies, welfare state policies, and employment conditions. For example, while Labonté and colleagues (2007) acknowledge the role of transnational corporations in reorganizing modes of production and service provision across national borders, trade liberalization is identified as largely driving these changes.

Even while other framework authors are better at identifying trade liberalization's influence in labour markets, specific policies and mechanisms relating the two are scantily explored. One of the most specified aspects of trade liberalization which is explored is the working environment of EPZs.

2.4 Preliminary Summary of Literature Review

In this chapter a systematic review of the literature was undertaken as an initial step towards answering the first research objective and question of this thesis:

Research Objective 1 (RO1): To identify how trade liberalization and social policy interact to influence health and its social determinants.

Research Question 1 (RQ1): How do researchers theorize the pathways and mechanisms mediating the trade liberalization and health relationship?

Studies were located for this review through a database search (ASSIA, PAIS, Econlit, WOK) and by using Google Scholar. Studies were included if they provided a clear analytical framework for conceptualizing pathways between trade liberalization and health. Because of an initial low recall of studies, a refined search strategy was adopted whereby reference lists of included studies were hand searched.

Google Scholar's 'cited by' feature was also utilized. Frameworks identified through these supplementary strategies were excluded if they focused exclusively on the health impacts of trade liberalization in reference to health services, tobacco, alcohol, medicines or food. This is because each of these health determinants already has a rich and extensive research environment and this review was primarily interested in the understudied impacts of trade liberalization on the fundamental determinants of health.

In total, 41 studies were identified for inclusion in this review. In order to answer the first research question, data was extracted from identified studies to answer the following questions. These questions were posed since the ways in which trade liberalization and health are understood can both conceal and illuminate pathways and mechanisms important for health.

1. How is trade liberalization understood in analytical frameworks relating trade to health?
2. How is health conceptualized in these frameworks?
3. How do researchers theorize the mechanisms and pathways mediating the liberalization and health relationship?

These questions provided a useful way of organizing the findings of this review. Overall it is found that researchers conceptualize both trade liberalization and health in a variety of ways. Few studies included in the review explore the exclusive impact of trade liberalization on health, most explore the health impacts of trade liberalization within broader globalization and health frameworks. However, this is noted to likely reflect a logical progression of research. Four main contexts are identified through which liberalizing process may impact health: (1) increased flows of goods and people (2) agricultural and food trade (3) structural adjustment programs and Poverty Reduction Strategy Papers and (4) labour markets. In these contexts, researchers identify a range of pathways between trade liberalization and health. In the next chapter, these findings are critically discussed in greater depth for a more comprehensive account how far they take us towards answering the first research objective and question of this thesis.

CHAPTER 3 MOVING THE RESEARCH AGENDA FORWARD

This chapter will critically discuss the results of the literature review. It will first look at the problems associated with the ways in which trade liberalization is conceptualized and defined by framework authors. It will then discuss the ways in which health is conceptualized and highlight the importance of differentiating between pathways to health and pathways to health inequalities. How health is framed and the implications this has for the acceptance of frameworks in global health discussions will also be highlighted.

Next, the pathways presented by frameworks authors will be critically discussed. The strengths and weaknesses of particularly influential frameworks will be noted. The pathways presented by framework authors across the four identified contexts of trade liberalization will also be considered. Areas of overlap between pathways identified in the four contexts will be highlighted since they identify aspects of trade liberalization that may be relevant in different contexts.

It will be argued that frameworks included in this review offer only partial glimpses of a conceivably much larger and more comprehensive trade liberalization and health framework, but that exploring these pathways exposes some general considerations that should be taken into account if a more comprehensive and clear picture of how trade liberalization impacts health is to be achieved.

Drawing on the points raised in this discussion as well as social epidemiological theories, this chapter will conclude with a proposed conceptual framework which seeks to outline broad pathways between trade liberalization and health, as well as areas for future research.

3.1 Towards a Common Definition of Trade Liberalization

How trade liberalization is conceptualized and defined can both conceal and illuminate pathways and mechanisms mediating its relationship to health. While conceptualizations offer context and broad understandings behind trade liberalizing processes, definitions should aim to provide specific accounts of what these processes are.

Most framework authors conceptualize trade liberalization in the context of globalization and by referring to ideas like ‘market integration’, ‘free trade’, and

‘opening-up’, or by proxy of increased trade flows. Explicit definitions of trade liberalization on the other hand, are largely lacking.

In the absence of concrete definitions, conceptualizing trade liberalization in these ways becomes problematic. This is because drawing on terms which themselves are vague and undefined makes it difficult to distinguish between pathways which are believed to originate from trade liberalization specifically and those which are believed to originate from other globalization processes in general. Conceptualizing trade liberalization in these ways is also problematic since the particular role of trade liberalization in these notions is unclear. For example, openness can broadly refer to deregulation policies or it can be used to indicate a country’s degree of integration with global economic forces. This latter notion of openness however, may depend on factors unrelated to trade liberalization, such as countries’ natural resource endowments (Subasat, 2008). Moreover, authors using trade flows as a proxy for trade liberalization confuse the processes of trade liberalization with its presumed outcomes. This is especially problematic given the recognition that trade liberalization does not inevitably lead to increased trade flows (Rodriguez & Rodrik, 2001).

On its face, the concept of trade liberalization may seem rather simple. However, this review demonstrates the difficulty in formally defining its constitution. For example, while many framework authors conceptualize financial liberalization as a central component of trade liberalization, others seem to see it as a distinct process.

Interestingly, currency devaluation and export support policies are acknowledged by one author as important components of trade liberalization (Thow, 2009) and GATS and TRIPS (outside of their typical associations with health services and the protection of drug patents) by others (Thow, 2009; Grown, 2005; Corrigall et al., 2008).

In sum, frameworks included in the literature rely largely on vague conceptualizations of what trade liberalization entails. When specific definitions are offered, a range of different and sometimes contradictory processes are identified by different authors. While the variety of identified processes begin to paint a more

comprehensive picture of trade liberalization as it relates to health, it also expose a lack of consensus on what exactly trade liberalization is.

The need for consensus in this regard is articulated by Starfield (2001) who argues that “common definitions of concepts are necessary in order for researchers to develop common measures, whether in descriptive, analytic, pathway, or intervention studies. The absence of a common definition will make it difficult if not impossible to draw any conclusions about the policy implications of the findings of research” (p. 552).

In other words, while explicit definitions of trade liberalization are needed to make clear theorized pathways to health, a common definition of trade liberalization is especially needed if we want to comprehensively explore the health impact of trade liberalizing processes and draw more informed conclusions about their combined impact on health.

In a glossary of trade terms for public health, authors Labonté and Sanger (Labonté & Sanger, 2006) define trade liberalization as “the process of reducing tariff levels and of making other government measures less trade restrictive” (p. 656). However, there are two main weaknesses with this definition.

First, it is extremely vague in regards to exactly which processes, outside of tariff reductions, follow from trade liberalizing policies. It thus provides little direction in terms of both mapping out and measuring the health impacts of trade liberalization. Second, its emphasis on the notion of reducing “trade restrictiveness” is problematic for reasons which are similar to those outlined above in relation to using notions of openness and increased trade flows as a proxy for trade liberalization. For example, does a reduction in trade restrictiveness refer to policies which increase the flow of goods into and out of a country? If so, export promotion strategies, such as export subsidies, can be considered as processes of trade liberalization. If however, trade restrictiveness refers only to government intervention, then export promotion strategies like export subsidies should not be considered an instance of trade liberalization. Moreover, in this latter case, a country could be characterized as undertaking a liberalization process even when this may reduce the overall amount of goods being traded (i.e when trade is further restricted).

For example, when export subsidies are reduced and consequently a country's exports fall.

In synthesising researchers' different conceptualizations of trade liberalization, this literature review underscores that trade liberalization is a multi-faceted concept shaped by the ideology of neoliberalism, characterized by unequal power relations, and promoted by powerful interests through a range of institutions, trade agreements and policies in the domains of goods, services and investment. This understanding of trade liberalization provides some direction for mapping out a wide range of liberalizing processes and their combined impact on health. It also is aligned with the majority of framework authors who see investment as a domain of trade liberalization. Moreover, by drawing attention to the political contexts and actors shaping the context within which liberalization policies are pursued, it also directs attention to how well the policy implications of research will be adopted.

However, while this notion conceives of trade liberalization as being shaped and promoted by certain ideas and actors, it does not say what it actually *is*. To further consider the problem of *defining trade* liberalization, this thesis will now turn to development economics, a field in which debates about the merits of trade liberalization have been ongoing for decades.

3.1.1 Definitional Insights from Development Economics

The aim of this next section is to present a brief overview of how trade liberalization has been defined in development economics. It is this literature base that is turned to because this is where understandings of trade liberalization have been most explored. As a research field, development economics has largely been driven by an agenda which seeks to understand the broader links between trade and economic performance. Debates about the merits of trade liberalization in terms of economic growth have been going on for decades and continue today. This literature base is therefore not only hugely expansive, but also involves several levels of abstraction: theoretical, empirical, methodological, historical, political, and ideological. It is beyond the scope of this section to provide a comprehensive account of this literature. Instead, a general overview will be given of how mainstream literature in development economics has defined trade liberalization or contributed to its definitional understandings.

Much of the contemporary work exploring the relationship between trade and growth has its roots in the 1970s. Little, Scitovsky and Scott (1970) and Balassa (1971) are often described as pioneering the investigation into the links between trade and economic performance. However, it wasn't until the classic National Bureau of Economic Research (NBER) study, directed by Krueger (1978) and Bhagwati (1978), that trade liberalizing notions were used in a systematic way to explore these relationships (Edwards, 1989, 1993).

In this latter study, the authors aim to explore how a country's trade orientation impacts growth. Here, trade liberalization is defined as any policy that reduces a country's 'anti-export bias'. While the technicalities of this idea are not important, what is vital is that this definition allows for a country to be characterized as 'liberalized' yet still employ very high import tariffs. This definition of trade liberalization thus does not preclude government intervention. Edwards (1989) argues that it is this point which prompted researchers to demarcate a 'liberal' trade regime, i.e. one which is characterized by a near absence of government intervention.

In the years after the NBER study, some continued to view liberalization as distinct from laissez-fair (Cooper, 1987), however the two are now generally understood to be conceptually aligned (Banuri, 1991; Edwards, 1989, 1993). Less controversial however, is that liberalization should be seen as a process (i.e a change in country's trade policy) (Cooper, 1987; Edwards, 1989). Moreover, important strides have been made in terms of distinguishing between trade liberalization and other related concepts such as openness and the orientation of a country's trade policy. For example Banuri (1991) distinguishes between several related concepts found in the literature on liberalization and growth. In this work, openness is described as an indication of a country's degree of integration with global economic forces. Trade orientation is taken to be a description of government policies which create the conditions for openness. Trade liberalization by contrast, is defined as "a strategy of policy reform intended to take the economy from a state of 'illiberalism' to that of liberalism', or, in more hackneyed terms, towards laissez-faire" (Banuri, 1991, p. 10).

Other work emphasizes that a country's openness may have less to do with government policies than a country's structural characteristics related for instance, to their natural endowments, proximity to export markets, and size of domestic markets

(Subasat, 2008). A country's trade flows may also depend on exogenous factors such as transport costs or changes in world demand (Rodriguez & Rodrik, 2001). Together these considerations indicate that that trade liberalization should be distinguished from notions of market integration as well as from other overall measures of trade flows since these may be related to other characteristics of a country or changes in global market in general.

3.1.2 Defining Trade Liberalization for Public Health

With the above considerations in mind this thesis presents the following working definition of trade liberalization for public health researchers: Trade liberalization is the process of reducing government intervention in matters of trade.

In contrast to the definition provided by Labonté and Sanger (2006) which focuses on *reducing the restrictiveness of trade*, at the heart of this definition is making *trade free from government restrictions*. The distinction is subtle, but important. Characterizing trade liberalization in this way prevents the confounding of liberalizing policies for processes which may increase a country's market integration, like export promotion strategies. It also ensures that liberalizing policies are not equated to increased trade flows or other measures which can conflate trade liberalizing policies for their presumed outcomes.

This definition also suggests potential methods for measuring instances of trade liberalization. For instance, trade liberalization may occur by way of reducing government intervention in terms of imports (e.g. by reducing import tariffs), or by way of reducing government intervention in terms of exports (e.g. by reducing export subsidies). Importantly, this definition also points to ways trade liberalization should not be measured, for example via changes in trade flows (e.g. by reference to the value of imports and exports in relation to a country's gross domestic product).

3.2 Considering Health Conceptualizations

3.2.1 Overall Conceptualizations

While both broad and specific conceptualizations of health provide insight into the links between trade liberalization and health, framework authors in this review largely discuss these relationships by conceptualizing health and health inequalities/inequities in general and often undefined terms. Nutrition related outcomes were by far the most commonly explored specific health/health inequality

outcome and made up the majority of frameworks categorized in the context of agricultural and food trade. Communicable and non-communicable diseases were more likely to be discussed in the area of hazardous flows, and occupational health outcomes more likely in the context of labour markets.

Frameworks were almost equally split between those investigating health and those investigating health inequalities/inequities. Framework authors investigating health inequalities/inequities were more likely to contextualize globalization and trade liberalization with references to power imbalances within and between countries, and by considering the role of neoliberalism as an ideological force driving the processes of trade liberalization. Outside of this distinction however, it wasn't readily apparent how pathways leading to health and pathways to health inequalities/inequities differ, a distinction which is increasingly recognized in public health literature (Nancy Krieger, 2011; Starfield, 2001).

3.2.2 Health Inequalities Versus Health Inequities

Frameworks which explore differences in health do so either by characterizing these differences as health inequalities or health inequities. Acknowledging the differences between these two concepts is important given divergent policy implications (Braveman, 2006). Health inequalities, sometimes referred to as health disparities in the US, typically highlight crude differences in health. Health inequities on the other hand, are often understood as “differences in health that are not only unnecessary and avoidable but in addition, are considered unfair and unjust” (Whitehead, 1992, p. 430). When understood in this sense, considerations of health equity consequently launch us into discussions of ethics, equality and justice. However, commonly used health inequality measures are also value laden and data are often interpreted through normative judgments of particular health distributions (Harper et al., 2010).

3.2.3 Framing Health

Frameworks included in this review were not only differentiated on the basis of their chosen overall health/health inequality outcome, but one third of all frameworks used a readily identifiable ‘frame’ of health to contextualize chosen outcomes. These frameworks characterize health in the context of development policy, as a human right, and/or in reference to global public goods.

The manner in which authors frame health, or health inequalities, did not have

a distinguishable impact on pathways presented in this review but since these frames constitute ways in which health is discussed in both global trade and global health discourses, they have important implications for how well frameworks are received and acted upon. They also have important implications for health equity (Labonté, 2008). These implications should be taken into consideration if a comprehensive understanding of how trade liberalization impacts health is to be accepted by actors in the global arena with positive impacts on health equity.

3.3 Developing our Understanding of the Links Between Trade Liberalization and Health

3.3.1 Early and Influential Frameworks: Setting the Stage

Early frameworks establishing the link between globalization and health identify important aspects of globalization that shape the context within which trade liberalization is pursued, adopted and responded to. These frameworks however, focus on a limited range of pathways and fail to name specific mechanisms mediating the trade liberalization and health relationship.

More recent frameworks have begun to account for a wider range of pathways and mechanisms by adopting social determinants of health perspective. The frameworks devised by Labonté and colleagues (2007) and Blouin and colleagues (2009) are highlighted for pioneering such work.

Blouin and colleagues (2009) offer the only framework which seeks to expose the exclusive impact of trade liberalization on a broad range of health outcomes. Therefore, even in the absence of an explicit liberalizing definition, there is less ambiguity in this framework as to whether the processes described are attributed to trade liberalization versus broader global processes. Moreover, because the framework explores the link between trade liberalization and health in general, it is less likely that trade liberalization is conceptualized in a way which is restricted to a specific health outcome. However, as previously discussed in section 2.3.3 many of the identified pathways are under conceptualized.

3.3.2 Across the Contexts: Strengths, Weaknesses, Overlap and Gaps

In the previous chapter, pathways between trade liberalization and health are discussed across four non-mutually exclusive contexts: increased flows of goods and people; agricultural and food trade, structural adjustment policies and poverty

reduction strategy papers, and labour markets.

In the domain of increased flows of goods and people, trade liberalization is associated with increases in communicable and non-communicable diseases by increasing people's exposure to infectious diseases and hazardous goods respectively. Additionally, a range of health outcomes is seen to result from an increased flow of drugs, legal and illegal, due mostly to import liberalizing strategies.

In the domain of agricultural and food trade, framework authors offer a more conceptually developed understanding of the pathways between trade liberalization and health. Frameworks explored in this domain identify three main pathways linking trade liberalization and health: food security, nutrition, and food safety. In these pathways a range of trade liberalizing strategies are explicitly addressed, but many associations are also assumed without theoretical support.

In the domain of structural adjustment policies and poverty reduction strategy papers, trade liberalization is viewed as a significant factor mediating the pathways to health. Despite this fact, a reduction in consumption subsidies is the only specific trade liberalization policy isolated for its unique impacts on nutrition and household income.

In the final domain of labour markets, trade liberalization is seen to impact health through a variety of pathways including, economic and social inequalities, wages, working conditions (both physical and psychosocial), job loss, job insecurity, and particularly for women, work-life (in) balances. Trade liberalization's specific influence on each of these pathways is less conceptually developed than it is in relation to pathways identified in the context of food trade and agricultural policy. EPZs are the most commonly identified liberalizing strategy in this context. More than in any other context, social policies are identified in the context of labour markets as a mediating factor between health and trade liberalization. Power relations are also more emphasized in this context and the strength of organized labour movements is consistently acknowledged as an important mediating factor, though one not comprehensively explored.

As previously discussed, literature relating trade liberalization to health was identified through a selective search strategy which favored frameworks moving away from the health impacts of trade in hazardous goods, foods, medicines, and the liberalization of health services. Despite this selectiveness both conceptualizations and definitions of trade liberalization were most comprehensive in the context of

food trade and agricultural policy. In this context trade liberalization is related to a wider range of agreements and policies than in other contexts, though frameworks in all contexts identify a similar range of institutions related to trade liberalization.

At first glance, it seems reasonable that agreements are less emphasized in other contexts. The selective search strategy utilized means that conceptualizations of trade liberalization in the context of ‘flows of people and goods’ are unrepresentative of research exploring this area. Moreover, it makes sense that in the context of structural adjustment policies, trade liberalization is more related to loan conditionalities than agreements. In the context of labour markets, it can be argued that agreements are less relevant since liberalizing processes are not usually tied to a specific product whose health significance can be interpreted through specific rules or trade measures contained for instance, in agreements such as the SPS or TBT. Instead, analyzing the more indirect health impacts of labour markets, or macroeconomic trends in general, tends to concern broader policy options, cut across different policy spheres, and raise ideological considerations (Fidler, Drager, & Lee, 2009).

However, the agreements offered by framework authors in the context of food and agricultural trade are more than just focused on the rules under which food related goods can be traded or under which conditions specific health-related restrictions can be taken. Authors in this context demonstrate that trade agreements are also important drivers of larger liberalization processes. Thow (2009) for example, relates GATS and TRIMS to trade liberalization given their respective commitments to remove constrictions on foreign ownership and companies' source of inputs. Both of these agreements have less to do with the direct health impact of specific products than they do with larger liberalizing processes.

A greater range of trade liberalizing policies are also considered in the context of food trade and agricultural policy. Again, while the selective search strategy likely played a major role in the dearth of agreements and policies identified in the context of flows of goods, better conceptualizations and definitions of trade liberalization in reference to structural adjustment, PSRPs, and labour markets are especially needed.

Categorizing pathways across these four contexts provided a conceptually useful way of discussing the vast majority of frameworks included in this review and highlighted both the strengths of, and gaps within, particular research areas. However, these different contexts also exhibit considerable overlap with each other.

This overlap helps to identify interrelated and contributing pathways across contexts. As previously mentioned, the majority of frameworks identified tend to explore pathways within the boundaries of a singular context. Recognizing the overlap between different contexts is therefore especially important as it allows for a more comprehensive appreciation of the trade liberalization-health relationship.

For example, liberalizing processes identified in the context of food trade and agricultural policy, demonstrate areas of overlap with labour markets-- the liberalization of export markets and its facilitation of work in cash cropping schemes, as well as decreases in farmer subsidies are both liberalizing processes also addressed in the context of labour markets. The health impacts of agricultural work explored in the context of labour markets also overlaps with nutritional concerns addressed in the context of food trade and agricultural policy. Interestingly, the differences between characterizations of trade liberalization within each of these contexts rest largely on the framing of impacts either in terms of 'people as consumers' or 'people as producers'. Recognizing the overlap across labour markets and other contexts not only suggests a wider range of trade liberalization conceptualizations and definitions to consider in relation to labour markets, but also identifies a wider range of interrelated pathways to health as exemplified in figure 17 below.

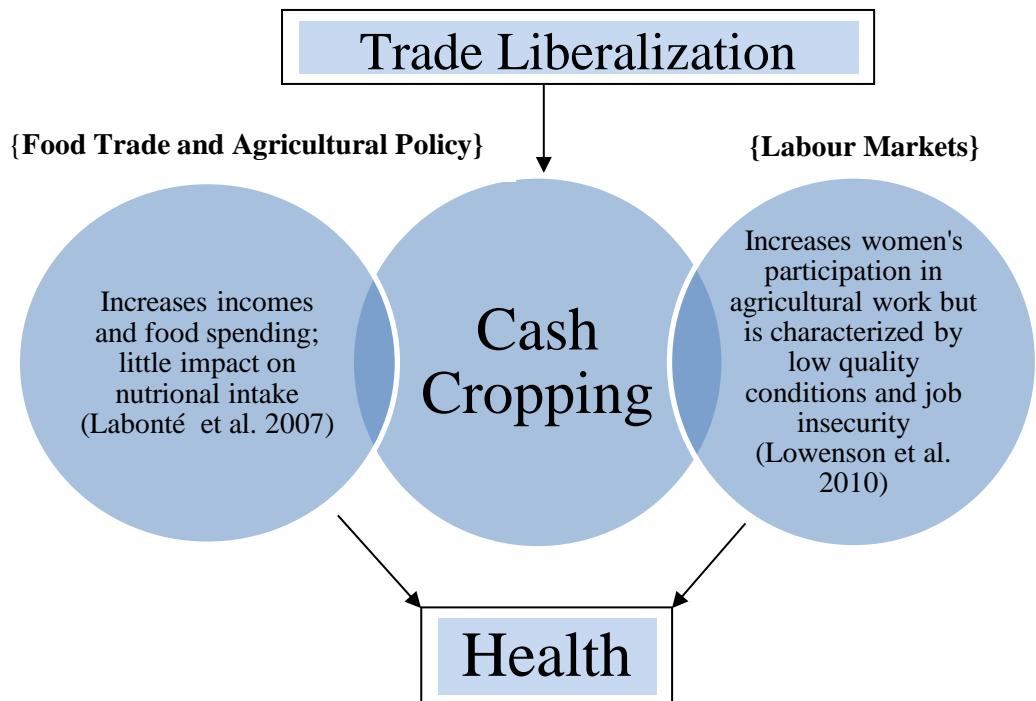


Figure 17 Example of usefulness in recognizing overlap between contexts

Categorizing pathways across these four contexts also exposes areas less explored by framework authors. While highlighted by the early and influential frameworks, less explored by later frameworks are issues relating to trade liberalization's impact on health through reductions in government revenues, reductions in government's policy space, the physical environment and the liberalization of trade in services. While it is likely due to the selective search strategy that a limited number of pathways addressing the liberalization of health services were identified, the liberalization of services in general would conceivably have impacts on health outside that of the health sector, via for example, education.

In total, pathways identified within each of these areas offer only partial glimpses of a conceivably much larger and more comprehensive trade liberalization and health framework. Moreover, in addition to previously raised issues, exploring these partial pathways exposes some general considerations that should be taken into account if a more comprehensive and clear picture of trade liberalization and its impacts on health is to be achieved.

3.3.3 General Considerations

The Distal-Proximal Divide

An important issue that quickly became apparent in the synthesis of identified frameworks is that the large majority conceptualize the health impacts of trade liberalization by contextualizing determinants of health within a causal hierarchy whereby distal determinants of health, such as institutions, policies and socioeconomic status, are seen to influence proximal determinants of health (i.e. physical, behavioral, and psychosocial exposures) through various intermediary pathways. As Krieger (2008b) suggests, this can be problematic since "events at one level can directly and profoundly affect nonadjacent levels, instantly and persistently, without intermediaries" (Krieger, 2008b, p. 225). Income, for instance, is sometimes described by framework authors as a distal determinant of health influencing further 'downstream' determinants (e.g. Meier 2006). This however, obscures the very direct and important impact income (and especially its distribution) can have on population health.

Graphical Representations

Many authors incorporate into their work graphical representations of their frameworks. Visual conceptual models offer the benefit of "explicating theory and

for organizing, comprehending and contesting scientific data and knowledge” (Krieger, 2008a, p. 1098). They can also “simultaneously spur ideas and observations”, and act as a “tool for integrating and evaluating rapidly emerging findings and for guiding new research” (p. 1098). However, two main problems characterize graphical representations included in this review. First, many visual frameworks did not incorporate graphically all the pathways explicated in the textual descriptions. Blouin and colleagues (2009) for example, describe the important role social policies play in mediating health outcomes; however their graphical framework fails to consider this pathway. Second, framework authors graphically describing trade liberalization's impact both on health and health inequality fail to account for the fact that pathways leading to health are not necessarily the same as those leading to health equity (Krieger, 2008a; Starfield, 2001). An example of this is the framework by Woodward and colleagues (2001) which shows the same pathways leading from globalization to both health and health equity.

Global and Differential Impacts

Four additional and related considerations which were exposed in the synthesis of frameworks have to do with the fact that 1) trade liberalization policies undertaken in one country can have important impacts on others and 2) that liberalizing policies have differential impacts both between and within countries.

This first issue is highlighted across a variety of frameworks which illustrate the potential impact of reductions in industrial countries' agricultural subsidies on market opportunities for producers in low- and middle-income countries. It is also illustrated particularly well by Hawkes (2006) who uses case studies to explore how agricultural liberalization policies in one country can impact health in others. While this consideration seems obvious, it is important to highlight because some frameworks ‘disembed’ their conceptualizations of trade liberalization from global interactions and instead concentrate on the domestic health impact of national liberalization processes.

Related to this issue is the consideration that the large majority of frameworks included in this review focus on the health impacts of trade liberalization in middle-to low- income countries. A notable exemption to this is the framework by Smith and Signal (2009) which explores pathways to nutrition-related health outcomes via trade liberalizing reforms in New Zealand.

Another consideration related to the differential impact of trade liberalization is the fact that trade liberalization policies can impact different countries differentially. This is exemplified by Singer (2008) who demonstrates how import liberalization has increased the availability of legal and illegal drugs with different impacts in “countries of production, countries of trans-shipment, and countries of targeted consumption” (p. 469).

A final consideration related to the above three is that many framework authors highlight the differential impact of trade liberalization policies within countries, across different actors and subgroups. Returning to the impact of industrialized countries' use of agricultural subsidies, some framework authors point out that a reduction in the level of these subsidies will not benefit all producers in low- and middle-income countries the same. Authors emphasize, for example, that larger transnational corporations are more likely to benefit from these reductions than smaller producers. Framework authors who explore health inequalities/inequities or the health outcomes within specific subgroups, such as women, also demonstrate how trade liberalization affects various populations within countries differently. The poor, women, children, and immigrants are often highlighted as particularly vulnerable population subgroups.

Together these final issues highlight the need for a better understanding of interactions of trade liberalization from the global to domestic level, across low-, middle-, and high-income countries, as well as across countries differentiated by their position in production-consumption chains.

With the issues and considerations explored in this section in mind, the next section of this chapter will present social epidemiological theory as the appropriate basis for developing a more comprehensive framework for exploring the links between trade liberalization and health.

3.4 Towards a Conceptual Framework

A benefit of synthesizing a variety of frameworks in a particular research area is to create a delimited number from which to work with (Starfield, 2001). Frameworks authors included in this review provide a myriad of pathways through which trade liberalization impacts health. These pathways emphasize a range of material and psychosocial exposures. Moreover, exploring these pathways exposed a range of considerations that should be taken into account when conceptualizing a

larger trade liberalization and health framework. As in any other scientific endeavor, in order to organize these pathways and considerations into a single framework which elucidates a testable set of ideas, theory is essential.

Concerned with the social and biological processes behind distributions of health, social epidemiology provides an appropriate basis for theorizing how trade liberalization impacts health. This is supported by the fact that the various theoretical variants of social epidemiology form the basis of most of the frameworks included in this review, albeit in a mostly implicit way.

Krieger (2001, 2011) identifies three major theoretical directions taken in contemporary social epidemiology: (1) sociopolitical; (2) psychosocial; and (3) ecosocial. While not mutually exclusive, these approaches provide theories of disease distribution that emphasize different social mechanisms to explain how populations arrive at different levels of health with different magnitudes of health inequalities.

Each of these social epidemiologic theoretical directions are characterized by various strands but generally speaking, it can be said that *sociopolitical* theories emphasize power relations, macro-level determinants of health, and the idea that health is a human right; *psychosocial* oriented theories emphasize psychological determinants of health, or, to use an oft cited expression, are concerned with how broader, social determinants of health 'get under the skin'; finally, *ecosocial* theory, the more nascent of the three theories, advances these first two by addressing their under-theorized areas and proposing an approach which fosters a more comprehensive analysis of health distributions by considering how interactions of various pathways across multi-levels and spatio-temporal scales literally become embodied, taking into account important historical, and sociopolitical drivers of these pathways across the lifecourse.

This section will highlight the main ideas behind each of these theories, as well as their relevance to frameworks included in this review. The different emphases these perspectives place on various social and biological determinants of health will be noted. On the basis of these distinctions, and taking into account considerations raised in the previous section, ecosocial theory will be presented as the most appropriate basis from which trade liberalization can be theorized to impact health. However, because trade liberalization raises issues not yet explored in ecosocial theory, an adapted ecosocial framework will be presented as a basis from which to further explore the links between trade liberalization and health.

3.4.1 Sociopolitical Theories

Krieger (2011) highlights eight self-designated variants of sociopolitical epidemiological theories:

- The social production of disease,
- The political economy of health,
- Social determinants of health,
- Population health,
- Fundamental cause,
- Political epidemiology,
- Latin American social medicine/collective health, and
- Health and human rights

3.4.2 Social Production of Disease/Political Economy of Health

The first two of these theories are considered to encompass the same conceptual premises and thus can be examined together. Central to both is the idea that “any given society's patterning of health and disease—including social inequalities in health—is *produced* by the structure, values, and priorities of its political and economic systems, in conjunction with those of the political and economic systems of the other societies with which it interacts” (Krieger, 2011, p. 167 emphasis in original). Tantamount to these theories is the distribution of power and the question of “who is producing what, with what technologies, for whom, and why” (Krieger, 2011, p. 167). The 'who' in this question is conceptualized as political and economic systems operating across multiple levels, both within and across various geographical areas. The 'who' also focuses on the institutions and individuals who control these systems. The 'what' of this question refers not only to the physical output, both in financial and material terms, of these systems; but also to the social structures created by them, the means by which social groups within these structures are able to sustain themselves, as well as challenge their social position; and the justifications used to support the priorities of these systems. However, typically unaccounted for by these theories is how these social conditions, processes, and relationships translate biologically.

Many of the frameworks included in this review emphasize the role of neoliberalism, the 'Washington consensus', peoples' unequal bargaining positions, and various power relations in influencing health outcomes and thus can be

understood as operating within a social production of disease/political economy of health framework. However, they too fail to explicate how these conditions translate on the biological level.

3.4.3 Social Determinants of Health, Population Health, and Fundamental Causes

Drawing on the core components of the social production of disease/political economy of health theories are the subsidiary theories of 'social determinants of health', 'population health', and 'fundamental causes'. Introduced at various times, these theories gained popularity in the mid to late 1990s and relate to the social production of disease and political economy of health theories by emphasizing the health importance of power and resource distribution. All three typically recognize that health is shaped by socioeconomic conditions. All three also typically pay heed to the social gradient in health, something frameworks in this review fail to do.

The social determinants of health and population health approaches are usually distinguished from the social production of disease and political economy of health approaches via their consideration of biological mechanisms. These approaches often consider both how early life conditions translate into both childhood and adult health, as well how cumulative (dis)advantage impacts health over the lifecourse. Neither of these considerations are however, addressed by frameworks included in this review highlighting areas for further exploration.

These two theories can be distinguished from the fundamental cause approach. As described in the introduction chapter of this work, this approach is centered on the idea that focusing on superficial risk factors of disease, without addressing their fundamental causes, will do little to change the link between socioeconomic status and health, since fundamental causes are associated with multiple risk factors and multiple health outcomes (Link & Phelan, 1995). Fundamental causes of disease are conceptualized “broadly to include money, knowledge, power, prestige, and the kinds of interpersonal resources embodied in the concepts of social support and social networks” (Link & Phelan, 1995, p. 87). This approach is also centered around the recognition that we live in a dynamic world system where new diseases and risk factors are always emerging and those with greater access to resources will always be better positioned to respond to them.

Moreover, fundamental causes can be distinguished from contextualized risk

factors as the latter concerns “how people come to be exposed to individually-based risk factors such as poor diet, cholesterol, lack of exercise, or high blood pressure” (Link & Phelan, 1995, p. 81).

Frameworks included in this review direct attention to both fundamental determinants of health (e.g. labour markets and factors related to social position such as income) and contextualized risk factors (e.g unhealthy diets, and consumption of alcohol and tobacco).

3.4.4 Latin American Social Medicine/Collective Health

Krieger (2011) notes that in Latin America, social epidemiological theories are growing in influence. Like the social production of disease/political economy of health approaches, these theories are focused on political and economic determinants of societal patterns of disease. However, it is noted that they typically pay more attention to the health “impact of capitalist development, imperialism, and politics on health” (Krieger, 2011, p. 189). They are also differentiated from their English-language counterparts given the higher degree of importance placed on non-state actors and social movements in shaping distributions of health.

None of the frameworks included in this review can be said to have drawn on this body of work, likely because frameworks which were not written in English were excluded. However, some frameworks included in this review do emphasize the role of people as social actors. Furthermore, collaborations that have begun to emerge between researchers in Latin America and those in the global North (Krieger et al., 2010) may serve to highlight additional areas of relevance to trade liberalization and health frameworks.

3.4.5 Health and Human Rights

The final approach within the sociopolitical strand of social epidemiology is the health and human rights approach. The basis of this approach is significantly different from the others discussed thus far in that it focuses on governments' obligations to “respect, protect and fulfill human rights” (Krieger, 2011, p. 190). As previously discussed, many frameworks included in this review frame health as a human right.

3.4.6 Psychosocial Theory

The second major strand of social epidemiology is concerned with the

psychosocial determinants of health. The central idea of this trend is that peoples' perception of social conditions, social interactions and their social status have important psychological, biological, and behavioral effects. As with some sociopolitical theories, health is seen to be systematically distributed across status hierarchies/social gradients. Unlike sociopolitical theories, psychosocial approaches identify peoples' relative rank in status hierarchies as fundamental stressors which are incorporated biologically via stress mediated mechanisms.

Also of concern to psychosocial theories are the social phenomena which can buffer or worsen the negative impacts of these perceptions, namely social support networks and social capital. However, it should be noted that the health relevance of social capital is a highly contested subject of debate (for a review of this debate see the International Journal of Epidemiology, 33, (4)).

Psychosocial theories typically afford less attention to the social and political systems responsible for distributions of health, although a handful of frameworks included in this review do draw attention to the psychological and mental health impacts of certain trade liberalizing policies (see for example, Corrigall et al. 2008). As previously mentioned they don't however, draw attention to the social gradient in health. They also don't account for the specific biological mechanisms resulting in these outcomes.

3.4.7 Ecosocial Theory

Compared to the other theoretical strands which have their roots in the mid twentieth century, ecosocial theory is a more recent addition to social epidemiological study. First introduced by Nancy Krieger (1994), ecosocial theory seeks to embrace both sociopolitical and psychosocial perspectives by considering both the biological and social determinants of health. However, ecosocial theory also strives to develop these perspectives by incorporating into them core ecological considerations, hence the prefix 'eco'. These ecological considerations relate to the levels of organization within which health important processes occur, the relationships and interactions that occur between different levels of organization, and the importance of historical conditions (Krieger, 2011).

The guiding question of ecosocial theory is "who and what drives current and changing patterns of social inequalities in health?" (Krieger, 2001, p. 672). Ecosocial theory seeks to answer this question via attention to four core constructs:

embodiment, pathways of embodiment; cumulative interplay between exposure, susceptibility and resistance; and accountability and agency (Krieger, 2001, 2011).

Embodiment

The first core construct of ecosocial theory, embodiment, refers “to how we literally incorporate, biologically, the material and social world in which we live, from conception to death; a corollary is that no aspect of our biology can be understood absent knowledge of history and individual and societal ways of living” (Krieger, 2001, p. 672). Importantly, the construct of embodiment also “recognizes that socially-structured causal links between exposures and outcomes can vary over time and place, a proposition consonant with contemporary ecological theorizing” (Krieger, 2011, p. 216). This advances other social epidemiological theories by recognizing that “explanations of disease distribution cannot be reduced solely to explanations of disease mechanisms or to static notions of “status” or “fundamental” causes, as the latter do not account for why actual disease rates and patterns of health inequities change, in complex ways, over time and place” (Krieger, 2011, p. 222).

Given the dynamic nature of trade liberalization over time and place, this idea is also particularly relevant to the aim of this review. Few frameworks included in this review for example, incorporate considerations of the pace and sequencing of trade liberalization strategies over time. As previously mentioned, they also fail to account for the cumulative impacts of exposures over the lifecourse or to the potential time-lagged health effects of liberalizing strategies. However, this idea does align well with Labonté and Togerson’s (2003) framework which incorporates a consideration of the super-ordinate context that is how countries’ pre-existing endowments together with their political systems can mediate trade liberalizing processes.

Pathways of Embodiment, & the Cumulative Interplay of Exposure, Susceptibility, and Resistance

The second and third core constructs of ecosocial theory acknowledge that embodiment occurs via a diverse set of concurrent and interacting pathways, across multiple levels and lifecourses. Highlighted in this regard are “adverse exposures to, along with differential societal and biological susceptibility and resistance to:

1. economic and social deprivation;
2. toxic substances, pathogens, and hazardous conditions;

3. discrimination and other forms of socially inflicted trauma (mental, physical, and sexual, directly experienced or witnessed from verbal threats to violent acts);
4. targeted marketing of harmful commodities (e.g. “junk” food and psychoactive substances such as tobacco, alcohol, and other licit and illicit drugs);
5. inadequate or degrading health care; and
6. degradation of ecosystems, including as linked to systematic alienation of Indigenous populations from their lands and corresponding traditional economics (Krieger, 2011, p. 223).

While these pathways were conceptualized by Krieger (1999, 2011) in an attempt to understand the ways in which racism impacts health, they also summarize many of the pathways addressed by framework authors included in this review. However, absent from this account, in relation to the health impacts of trade liberalization, are the following determinants: social and economic inequalities (whose health impacts extend beyond that of absolute deprivation) and job insecurity, although this may be represented either by social deprivation or hazardous conditions.

Accountability and Agency

The final and fourth construct of ecosocial theory is that of accountability and agency. This construct addresses both how health distributions are created, and the ways in which they are monitored, analyzed, and addressed. Drawing largely on social production of disease and political economy of health theories, this construct “directs attention to issues of power at each and every level, and hence to institutions’ and individual peoples’ capacity to act (“agency”) and their responsibility for both actions taken and avoided (“accountability”)” (Krieger, 2011, p. 225).

It acknowledges that this capacity to act (and consequent accountability) – which can be directed at either at the same or different levels—is not equivalent across levels. That is, “in line with more recent sociological, ecological, and biological theorizing” ecosocial theory posits that “macrolevel phenomena are more likely to drive and constrain meso- and microlevel phenomena than vice versa—even as, under particular circumstances the micro can powerfully affect the macro”, as has been historically demonstrated via popular movements, which among other social

achievements, have abolished slavery, decriminalized homosexuality, and established welfare states (Krieger, 2011, p. 225).

Thus, ecosocial theory recognizes that causal pathways need not be linear, reconciling the distal/proximal divide problem characterizing the majority of frameworks included in this review. It also accounts for many frameworks' consideration of power relations.

3.5 Trade Liberalization and Health: An Ecosocial Framework

In summary, ecosocial theory advances sociopolitical and psychosocial approaches by drawing attention to under-theorized and under-researched issues in these areas. Moreover, it brings these theories together by reframing simplistic divisions of social and biological determinants of health in a more comprehensive manner which considers the sociopolitical, historical and spatiotemporal relevance of multi-level, and simultaneously interacting pathways, as well as their biological embodiment across the lifecourse. In other words, “more than simply adding ‘biology’ to ‘social’ analyses, or ‘social factors’ to ‘biological’ analyses, the ecosocial framework begins to envision a more systematic integrated approach capable of generating new hypotheses, rather than simply reinterpreting factors identified by one approach (e.g. biological) in terms of another (e.g. social)” (Krieger, 2001, p. 673). A graphical representation of ecosocial theory can be seen below in figure 18.

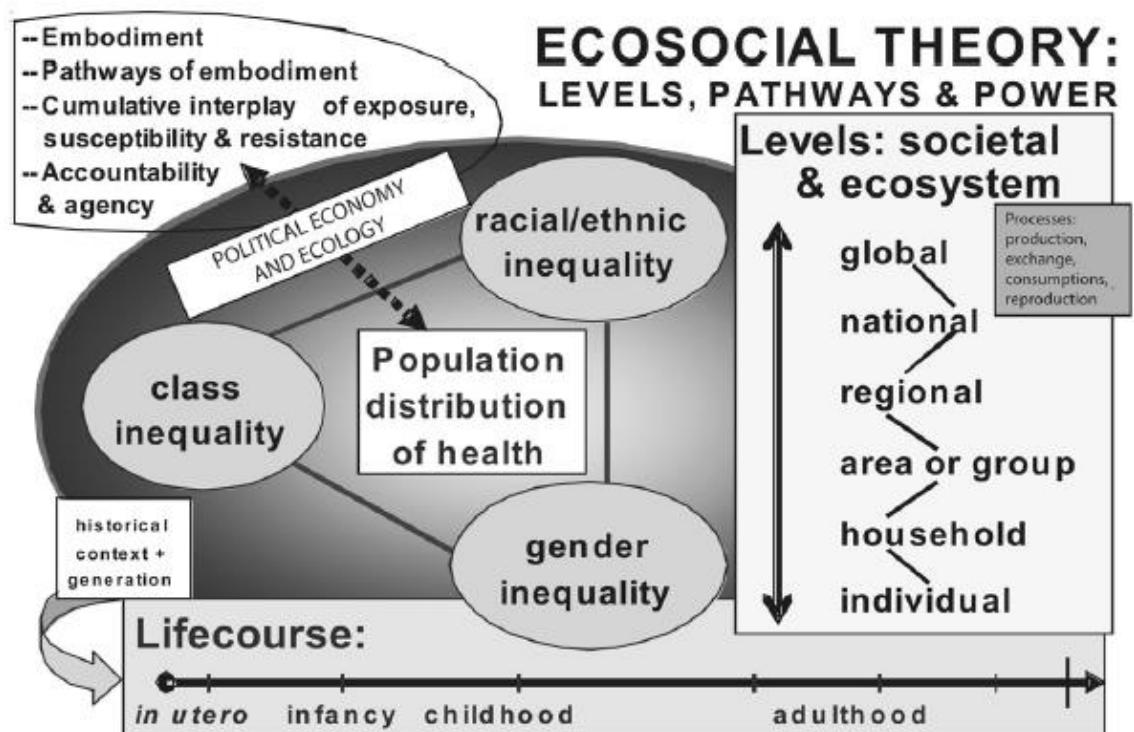


Figure 18 Ecosocial Theory (Krieger 2008)

By advancing an approach which embraces both sociopolitical and psychosocial perspectives, ecosocial theory also provides an overarching framework which incorporates the types of theorizations employed by the majority of framework authors included in this review. Importantly it also provides a means of advancing areas thus far under conceptualized by framework authors. This is because frameworks exploring the link between trade liberalization and health have yet to consider the role biological processes play in shaping distributions of health, how liberalizing processes may have lagged effects on health, and also how these processes fit into lifecourse theories of epidemiology. By incorporating more theoretically advanced notions of how sociopolitical processes interact simultaneously across multi-levels, ecosocial theory can also free current trade liberalization and health theorizations from the shackles of the distal-proximal divide.

However, while providing a platform to advance current theorizations of the pathways between trade liberalization and health, ecosocial theory in its current state does not account for many of the considerations raised via the narrative synthesis of frameworks included in this review.

For this reason, an adapted ecosocial framework is presented below (see figure 19) which accounts for these considerations by incorporating the following:

contextualizations of trade liberalization within larger processes of globalization; the various aspects of trade liberalization identified by framework authors, and the range of domains and pathways through which framework authors relate trade liberalization to health.

Trade Liberalization & Health: An Ecosocial Perspective

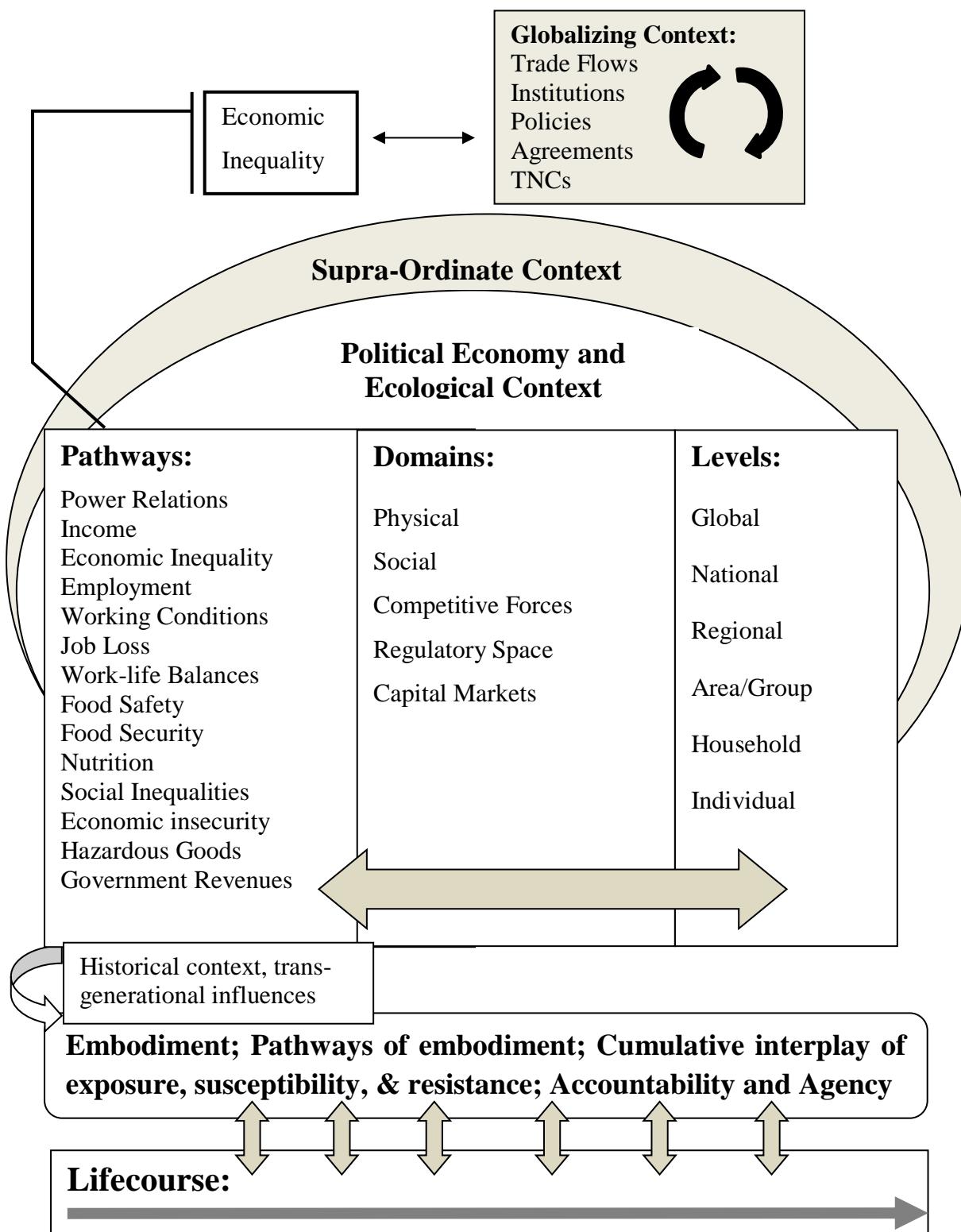


Figure 19 Trade Liberalization and Health: An Ecosocial Perspective

Contextualizations of trade liberalization within larger processes of globalization are incorporated into this new framework by drawing on the work of Woodward and colleagues (2001) as well as that of De Vogli and colleagues (2009). As previously discussed, Woodward and colleagues' (2001) representation of economic globalization as a feedback loop provides a particularly useful way of not only understanding how trade liberalization relates to other processes of globalization, but also of how it is propagated. Similarly but uniquely, De Vogli and colleagues (2009) demonstrate how public policies and economic inequality exist as part of a feedback loop, whereby trade liberalizing policies contribute to the growth of transnational corporations and thus their ability to further advance liberalizing policies. Their resulting accumulation of wealth and power is then seen to increase both economic and health inequalities between and within countries. The welfare state is also highlighted in this framework as a potential mediating factor between economic and health inequalities falling under the 'social' domain. Integrating these two frameworks provides a useful way of beginning to conceptualize the context within which trade liberalization operates.

Furthermore, a super-ordinate level, as described by Labonté and colleagues (2003), is added to the traditional ecosocial framework as it identifies a range of factors that shape the acceptance of, and domestic policy responses to trade liberalizing processes.

The various aspects of trade liberalization that are identified by framework authors are also incorporated into this new framework. Taken into account are not only specific trade liberalizing processes/policies, but also the institutions and agreements through which these processes are set into motion.

The pathways through which framework authors relate trade liberalization to health are accounted for first by incorporating Labonté and Torgerson's (2003) five domains: the physical environment; the social environment; competitive forces; governments' regulatory space; and capital markets. This helps us begin to conceptualize the major areas of society that trade liberalization impacts. While pathways within each of these domains have yet to be comprehensively explored, this provides a conceptually useful way of hypothesizing what they might be. Considering these domains also highlights the importance of trade liberalization's impact on areas under explored by framework authors including its impact on welfare states (e.g. via government revenues), governments' policy space, and the

physical environment. The main pathways identified by framework authors in each context are also noted, but this list should not be considered exhaustive.

Moreover, Labonté and colleagues' (2008) adoption of the Diderichsen et al. (2001) health inequity model is highlighted in this review for providing a unique analysis of the mechanisms by which various pathways create changes in the distribution of health across populations, while not readily apparent in the graphical representation of this new framework such mechanisms can be considered as an element of the ecosocial construct of 'cumulative interplay of exposure, susceptibility and resistance'.

3.5.1 Framework Limitations

The point of this adapted ecosocial framework, along with ecosocial theory in general, is not to lay claim to a grand theory but rather to present a tool for orienting deeper analyses into the relationships between trade liberalization and health. The strength of this framework is that while it synthesizes a range of frameworks exploring the link between trade liberalization and health, it also provides a tool for conceptualizing links across areas thus far less explored. It also addresses one of the main problems associated with conceptual frameworks relating trade liberalization to health thus far, the distal-proximal divide.

A main weakness is that it fails to clearly map out the processes and mechanisms linking the various elements contained within it. However, because the framework was developed on the basis of two research fields still very much in their early stages, it is expected that as these fields develop so too will our ability to capture more thoroughly the precise mechanisms and interactions at play.

The aim of synthesizing frameworks relating trade liberalization to health was to identify the potential pathways through which trade liberalization impacts health. More specifically, given the scant attention paid to the social determinants of health, it was primarily concerned with influences on health outside of those related to trade in hazardous goods, food, medicines and the liberalization of health services. Because of a low recall of frameworks, a supplementary search strategy was adopted which purposively excluded frameworks focused on these pathways. Therefore, while the synthesis still included frameworks emphasizing these pathways by including those identified through the database searches, conclusions made about the comprehensiveness of trade liberalization conceptualizations, definitions and health

related pathways should be considered with this limitation in mind. That a selective search strategy was used should also be taken into account when considering the adaptations made to the ecosocial framework which were based on these conclusions.

It should also be noted that while the review included frameworks highlighting pathways from trade liberalization to both health and differences in health, by using ecosocial theory as the basis for a comprehensive framework, it settles on an approach largely directed at explaining inequalities in health. The framework does however, lends itself to any of the previously discussed frames of health.

Moreover, by drawing on Woodward and colleagues (2001) contextualization of trade liberalization, this new framework aligns itself with framework authors who consider economic processes as the primary drivers of globalization.

3.6 Summary of Literature Review & Progress Towards Research Objective 1

In Chapters 2 and 3, a systematic literature review was undertaken as an initial step towards answering the first research objective and question of this thesis:

Research Objective 1 (RO1): To identify how trade liberalization and social policy interact to influence health and its social determinants.

Research Question 1 (RQ1): How do researchers theorize the pathways and mechanisms mediating the trade liberalization and health relationship?

In Chapter 2 it was found that researchers conceptualize both trade liberalization and health in a variety of ways. Four main contexts are identified through which liberalizing processes may impact health: (1) increased flows of goods and people (2) agricultural and food trade (3) structural adjustment programs and Poverty Reduction Strategy Papers and (4) labour markets. In Chapter 3, these findings were critically discussed in greater depth. An important finding in this chapter is that authors often conceptualize and define trade liberalization in a variety of sometimes conflicting and problematic ways. For this reason literature from development economics was briefly reviewed. Insights from this field informed the development of a working definition of trade liberalization for public health: trade liberalization is the process of reducing government intervention in matters of trade.

Another important finding is that the links between trade liberalization and health have been especially under-conceptualized in relation to SAPs, Poverty Reduction Strategy Papers and labour markets.

In total, studies included in the literature review are found to offer only a partial picture of a conceivably larger and more comprehensive trade liberalization and health agenda. However, exploring these partial pathways exposed some general considerations that should be taken into account when considering the trade liberalization and health relationship. For example, the importance of overcoming the distal-proximal divide, that trade liberalization policies undertaken in country can have important impacts on other countries, and that liberalizing policies have differential impacts both between and within countries. With these findings and considerations in mind, ecosocial theory emerged as a useful basis for both organizing pathways to health and providing a means of advancing areas thus far under conceptualized, for example, how liberalizing processes may have lagged effects on health. With this in mind, the chapter presented an adapted ecosocial framework of the relationship between trade liberalization and health.

Together the results of the literature review and the adapted ecosocial framework take us some way towards answering the first research question of this work. Importantly, synthesizing included studies brings into greater focus the broader globalizing contexts within which trade liberalization is pursued, adopted and responded to. Moreover a wide range of liberalizing processes is highlighted across the four identified contexts. However, two main weaknesses of the review, and accompanying ecosocial framework, are that they offer little by way of empirical evidence and little in direction towards meeting the broader research objective of identifying how trade liberalization and social policy interact to influence health and its social determinants. This first limitation relates to the fact that few studies included in the review drew on empirical data. The second limitation relates to the fact that included studies rarely acknowledge social policies as a health mediating factor, except in the context of labour markets.

As mentioned in the introduction to this thesis, the research objectives, questions and methods of this work were not fixed from the beginning, but rather emerged and evolved as the work progressed. As will be made clear in the following

pages, the second part of this thesis was undertaken as a means to build on the findings of the literature review through empirical case study work.

INTRODUCTION TO PART 2

This thesis is conceptually organized into three parts. While the first part consisted of the literature review (including the development of the adapted ecosocial framework), the next two parts emerge directly in response to the results of this work.

The literature review presented in the previous two chapters represents the first attempt at delineating the health impacts of trade liberalization through a systematic narrative synthesis. While this review is noted to take us some way towards answering the first research question of this thesis, again, two main weaknesses are that it offers 1) little in the way of empirical evidence and 2) little in respect to the broader research objective of identifying how trade liberalization and social policy interact to influence health and its social determinants (RO1). As mentioned previously, this first limitation relates to the fact that little empirical work has been undertaken by the studies identified in the review. The second limitation relates to that fact that included studies rarely acknowledge social policies as a health mediating factor, except in the context of labour markets.

With these limitations in mind it was decided to undertake an empirical exploration of the trade liberalization and health relationship by focusing specifically on labour markets in order to advance progress towards meeting the first research objective. It is this empirical work which is the focus of the second and third parts of the thesis.

Considerations which were raised in the literature review, and the adapted ecosocial framework itself, also informed various aspects of the next two parts of this thesis. For example, the definition of trade liberalization developed in Chapter 3 was used to locate an appropriate instance of trade liberalization to empirically explore. Moreover, and as will be made clearer in Chapter 5, the adapted ecosocial framework informed methodological decisions surrounding this empirical work.

Specifically, parts two and three of this thesis are a case study of how trade liberalization and social protection policies interact to influence distributions of health. The ‘case’ in this study is the 2005 phase-out of the Multi-fibre Arrangement (MFA) which after nearly 50 years of protection abruptly liberalized the textile and clothing sector. As will be made clear in the next chapter, this event fits the definition of trade liberalization presented in Chapter 3 since it represents a trade related process characterized by a reduction in government intervention.

The units of analysis in this case work are the many low-, middle- and high-income countries for which the clothing and textile industry is an important source of employment, especially for women. Since systems of social protection in these countries are highly diverse, analysing how important determinants of health and health outcomes changed in these countries after the MFA phase-out can help to answer the first research objective of this thesis which, again, is **to identify how trade liberalization and social policy interact to influence health and its social determinants.**

It is here that the second research objective of this thesis now assumes its significance, it is **to investigate and analyse how the phase-out of the Multi-Fibre Arrangement impacted health in countries reliant on the textile and clothing sector for employment (RQ2).** The concomitant research questions are as follows:

How did health outcomes change after the phase-out of the Multi-Fibre in countries reliant on the textile and clothing sector? (RQ2)

What are the potential causal mechanisms responsible for these changes? (RQ3)

The significance and reasoning behind the development of these research questions will be discussed in Chapter 5.

Three chapters are included in the next section (i.e. part two) of this thesis. Chapter 4 will introduce the textile and clothing (T&C) industry as a particularly valuable sector to consider when exploring the health impacts of trade liberalization through labour markets. It will also present the main analytical framework used to guide this case study. Chapter 5 will then detail the methods used to answer research question two (RQ2) and Chapter 6 will present the results and discussion of this analysis. The third section of the thesis will move to consider the third and final research question of this thesis.

CHAPTER 4 THE TEXTILE AND CLOTHING SECTOR AND THE MFA PHASE-OUT

4.1 Introduction

The literature discussed in Chapters 2 and 3 outline a range of potential pathways between trade liberalization and health. While in totality the evidence demonstrates a largely nascent field; it was found that the links between trade liberalization and health have been especially under-conceptualized in relation to labour markets. However, this under-conceptualization relates mainly to the issue that specific liberalizing processes have rarely been identified in this context. The literature by contrast, offers relatively developed theorizations of the pathways to health via various employment and working conditions.

This chapter will introduce a major liberalization episode in the textile and clothing (T&C) sector, the phase-out of the Multi-Fibre Arrangement (MFA) in 2005, as a particularly useful case to consider when exploring the health impacts of trade liberalization through labour markets. It will also present the main analytical framework used to guide this case study.

The T&C sector is one of the most globalized industries in the world with around 130 producing and exporting countries (UNDP, 2006). The reason for its globalized structure is multi-fold, flowing from the nature of its supply chain which “typifies the development of global production chains in the world economy” (Heerden, Berhouet, & Caspari, 2003, p. 1), as well as from preferential trade schemes, regional trade agreements, historical structures of protection, and most recently the sector’s liberalization. This chapter will examine each of these aspects of the sector in turn. In doing so, employment changes which occurred after the MFA phase-out will be contextualized in ways that have implications for potential pathways to health. In considering these implications, the chapter will present the phase-out as a valuable natural policy experiment for exploring the health impacts of trade liberalization and discuss why the EMCONET framework (Benach et al., 2007) provides a valuable tool for investigating these impacts.

4.2 The T&C Supply Chain

Simply speaking, the supply chain of the T&C sector begins with the sourcing of raw materials, including those of both natural (such as cotton and wool) and man-

made origin (such as nylon and polyester). These materials are used to create fibres which are then spun into yarn for the production of woven or knitted textiles. Textiles are then cut and sewn into clothing, home furnishings, or other technical textile products, which are then sold to retail outlets (Frederick, 2010; Nordås, 2004).

Each step of the T&C production process is associated with a different capital/labour ratio and degree of value-added (Heerden et al., 2003). The two ends of the chain, fibre production along with the design, marketing and retail end, incorporate the most value-added and capital intensive aspects of production. It is these production processes that have partly remained in developed countries, although more recently they have begun to shift towards middle-income countries (Lopez-Acevedo & Robertson, 2012). Between the ends of production, are the activities of cutting, sewing and finishing garments. Because these activities are labour-intensive, have low start-up costs, and depend on relatively simple technology, they have absorbed a significant proportion of unskilled, mostly female, labour in developing countries.

While the majority of production and retail takes place in the middle to low priced segment of the T&C sector, it is worth recognizing that there also remains a high price, high quality fashion market in developed countries which is “characterized by modern technology, relatively well-paid workers and designers and a high degree of flexibility” (Nordås, 2004 p. 3). In this market segment, firms respond directly to, and often influence, customer preference. In the middle- to low-priced goods market, consumer demand is also the ultimate determinant of what is produced and when (Nordås, 2004). However, since this demand is both seasonal and unpredictable, the industry employs a high proportion of part-time, piece-rate, and/or household-based workers (UNDP, 2006).

The fragmentation of production can also create opportunities for countries to move further up the chain into processes that involve more skill and are associated with higher wages (Lopez-Acevedo & Robertson, 2012). Indeed, it has been argued that the T&C sector launched most developed and newly industrialized countries into more intensive forms of manufacturing, guiding their development trajectories (Adhikari & Yamamoto, 2008).

4.3 Trade Preference Schemes and Regional Trade Agreements

Various trade preference schemes and regional trade agreements have

contributed to the globalized nature of the T&C sector (Audet, 2004; OECD, 2004). In the two dominant import markets, the US and the EU, ‘production sharing schemes’ and ‘outward processing programmes’ allow garments to be exported to low-cost locations for assembly and re-importation at lower tariff rates. For low-wage countries these schemes boost access to high-quality inputs and foreign markets, for developed countries they can strengthen the competitive position of domestic suppliers by decreasing labour costs (OECD, 2004). Production sharing schemes are noted to have increased industrial activities in Mexico, as well as the Caribbean, Central America and Asia (Seyoum, 2010). Historically, these trade preference schemes have generated a significant amount of trade, accounting for 15% of EU trade in textiles in 1995, and 24% of total clothing imports into the US in 1999 (OECD, 2004).

Other preferential trade arrangements include the general system of preferences (GSP) as well as GSP supplemental preference programmes like the Everything but Arms (EBA) scheme in the EU and the Africa Growth and Opportunity Act (AGOA) in the US. Through the GSP, 27 developed countries afford tariff preferences to over 100 beneficiary countries (Lopez-Acevedo & Robertson, 2012). Since 2001, the EBA has granted duty free access to the EU market for all least developed countries’ products (except arms and ammunitions), without quota restrictions (with the exception of a few agricultural products which were eventually phased in). Partly as a result of the EBA, along with other quota and tariff free access arrangements¹ Bangladesh, Tunisia, Morocco and Mauritius represented the 4th, 6th, 7th, and 18th largest suppliers to the EU clothing sector in 2004 (Curran, 2008).

Since 2000, the US has offered preferential market access to eligible countries in Sub-Saharan Africa under the AGOA. This has greatly expanded exports in the region, most of which are accounted for by the T&C sector (Keane & Willem te Velde, 2008). However, rules of origin provisions in both the EU and US trade preference schemes can also limit the opportunities available to lower income countries by prohibiting the importation of textiles from third countries for in-country assembly and exportation (Barber, Gowthaman, & Rose, 2004; Keane & Willem te Velde, 2008).

¹ i.e such as those contained within the Conotonou Agreement and various Euro-Med Agreements

Regional trade agreements (RTAs) have also shaped production and trade opportunities in the T&C sector. For example, in the context of NAFTA, Mexico has been able to expand its T&C industrial activities (OECD, 2004). Indeed, it has been reported that NAFTA “was instrumental in spearheading Mexico to its position as the world’s fourth largest clothing exporter in 2001” (OECD, 2004, p. 60).

4.4 Protection and Liberalization of the Sector

The road leading to eventual liberalization of the T&C sector is often described as beginning in the 1950s, when Japanese cotton textile exports were restricted into the United States via “voluntary export restraints”. Soon after “voluntary restrictions” were placed by the United Kingdom on cotton textile exports from Hong Kong, India, and Pakistan (Spinanger, 1999).

As East Asian countries began developing their T&C industries however, developed countries enlisted further restraints to regulate a growing range of T&C imports. In 1961, a forum was established within GATT to address concern among large importing countries (largely the US and those within the EU) that increasing imports were causing ‘market disruption’—a concept integrated into GATT only a year prior and defined as ‘instances of sharp import increases associated with low import prices not attributable to dumping or foreign subsidies’ (Heron, 2006, p. 3). This forum resulted in the Short Term Arrangement Regarding International Trade in Cotton (STA) which unilaterally imposed quotas on cotton-based textiles and clothing for one year. An extended version of this Agreement was instituted by the Long Term Agreement Regarding International Trade in Cotton Textiles (LTA) in 1962 (Naumann, 2006).

Because the STA and subsequent LTA regulated only cotton exports, East Asian countries began to successfully manufacture and export artificial and non-cotton textile products (Heron, 2006). This prompted protracted renegotiations of the LTA (again, initiated by Western policy makers) and in 1974, the Multi-Fibre Agreement (MFA) was born to impose quotas on materials other than cotton (such as wool and other man-made fibres) (Heron, 2006; Nordås, 2004).

The MFA aimed to gradually open the T&C sector in an orderly way that would avoid market disruptions. It set targets for increased trade by increasing quotas at an average annual growth rate of 6% (Naumann, 2006). However, subsequent negotiating rounds (in 1977, 1981, 1986, and 1991) “served to place increasingly

restrictive quotas on most of the leading developing country exporters” (Heron 2006, p. 4). By the end of the second negotiating round in 1981, 80% of T&C imports from developing countries into the US were subject to quotas. On the other hand, T&C trade between developed countries—“which in 1990, accounted for approximately 43 percent of total world trade in textiles and 35 percent of total world trade in clothing”—was completely free from quantitative restrictions.

In a report published by the WTO, Nordås (2004, p.13) highlights four ways the MFA violated the free trade principles of the multilateral trading system: (1) it violated the most favoured nation principle; (2) it applied quantitative restrictions rather than tariffs; (3) it discriminated against developing countries; and (4) it was non-transparent. During Uruguay Round negotiations, between 1986 and 1994, it was finally decided to liberalize the global T&C sector. However, this was not done with the intention of rectifying these violations of the multilateral trading system, rather “the most often cited explanation suggests that it was due to the calculations on the part of developed countries—particularly the US – that the liberalization of the T&C regime would offer significantly more room for manoeuvre with regard to trade rights and services” (Heron, 2006, p. 4).

Following the expiration of the MFA in 1994, the Agreement on Textiles and Clothing established that countries wishing to retain quotas would have to commit to ten year phase-out period. This phase-out was meant to take place over four stages, with the last quotas lifted on January 1, 2005. However, using ‘safeguard’ measures, countries were able to maintain the majority of their quotas until the final phase-out in 2005. The US for instance, maintained about 89% of its quotas, the EU, 70% and Canada 79% (Kowalski & Molnár, 2009). This meant that liberalization of the sector in 2005 was both abrupt and rapid.

4.5 Employment Impacts of the MFA Phase-Out

The significance of the T&C sector for developing countries has grown rapidly since the 1970s (Lopez-Acevedo & Robertson, 2012). In the mid-1960s developing countries accounted for around 25% of global apparel exports, by 2000 this figure had increased to 70% (Lopez-Acevedo & Robertson, 2012). For many low-income countries, apparel exports account for the greatest share of total manufacturing exports. For example, in Cambodia, Bangladesh, Honduras, and Sri Lanka, the apparel industry accounted for 85%, 71%, 49%, and 41% of total

merchandise exports in 2008, respectively (Lopez-Acevedo & Robertson, 2012).

Furthermore, the sector accounts for a significant proportion of employment in many countries with large exporting industries. Employment in T&C production for least developed and low-income countries as a share of total employment in manufacturing ranges from 35% in selected low income countries, to 75% in Bangladesh and 90% in other selected LDCs (e.g. Lesotho, Cambodia) (Keane & Willem te Velde, 2008).

In these countries, the T&C sector is often the largest employer of women after agriculture (Lopez-Acevedo & Robertson, 2012). This has brought empowerment for many women in the form of increased control over income and greater say in household decisions, although these advances have not been without social costs as working conditions in the sector can be particularly dangerous and exploitative (UNDP, 2006).

While quotas served to restrict trade from developing countries with competitive export markets, it also served to develop the T&C industry in countries that might not have otherwise developed their sector (Lopez Acevedo & Robertson, 2012). This is because quotas created incentives for companies in countries meeting their export limits to set up production facilities in other, less constrained, countries. This process was known as ‘quota-hopping’. Korean companies for example, are noted to have established T&C production facilities in Bangladesh, the Caribbean and Sub-Saharan Africa; Chinese companies to have “established factories in several Asian and African locations, Indian companies in Nepal and even relatively minor players in the global markets such as Sri Lankan and Mauritian business persons established factories in the Maldives and Madagascar, respectively” (Adhikari and Yamamoto, 2008, p. 184). Because the allocation of quotas was significantly more lenient towards countries with little or no T&C industry, less developed countries saw a significant expansion of their industry (Heerden, Berhouet, & Caspari, 2003).

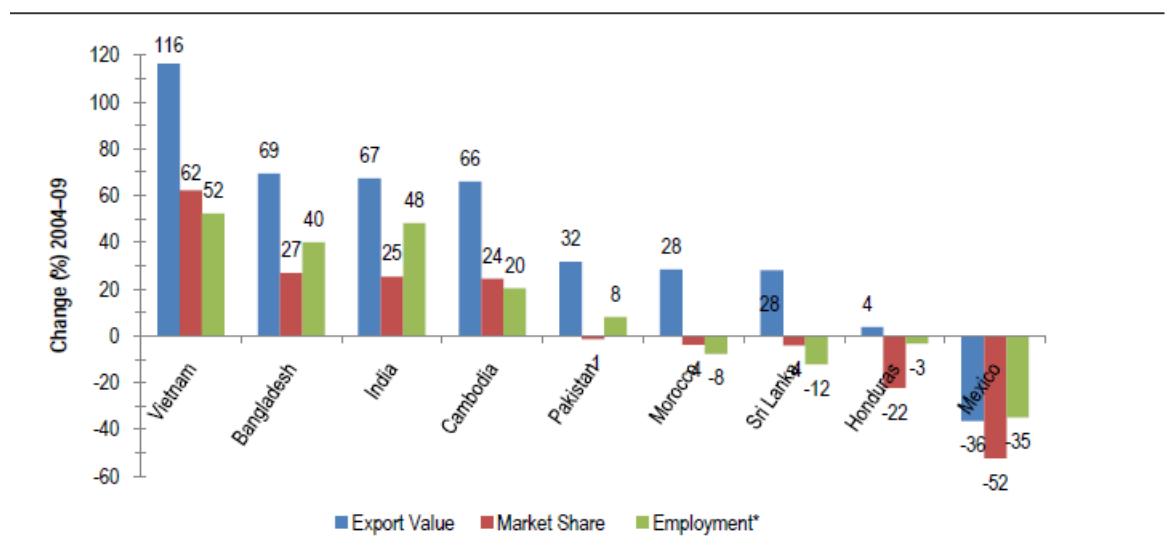
Prior to the phase out of quotas in 2005, a number of studies predicted large growth in Chinese T&C exports and in other large T&C exporting countries². By contrast, countries that had benefited from quota-hopping were expected to lose market shares. Early and tentative conclusions reached by the UNDP (2006) and ILO (2005) largely mirrored these predictions. An analysis by Curran (2008), which

² See Curran (2008) for a list of key studies and their forecasts.

compares a range of forecasted impacts, also finds that predictions were mostly accurate, except in the case of a few notable suppliers: namely Korea and Taiwan, who saw their exports decrease in spite of more optimistic estimations, and Pakistan, Morocco, Tunisia and Turkey, who saw their exports increase in spite of more pessimistic estimations.

A more recent study published by the World Bank (Lopez-Acevedo & Robertson, 2012) examines the impact of the MFA phase-out through case studies of nine developing countries: Bangladesh, India, Sri Lanka, Pakistan, Honduras, Mexico, Vietnam, Cambodia and Morocco. The main focus of this study is to examine changes in apparel exports, wages, and employment. This study is unique in that it offers an assessment of employment impacts after the MFA phase-out for a range of countries. Most studies examining post-MFA impacts on the sector focus on changes in exports or market shares, rather than employment.

The study finds that between 2004 and 2008 some developing countries were able to expand their T&C exports, like Bangladesh (by 69%), India (by 67%) and Pakistan (by 32%); while others saw their exports severely contract for example, Mexico by 36%. Similar patterns emerged in regards to market shares, although some countries, for instance Pakistan, Morocco, Sri Lanka, and Honduras, all saw market share declines despite increases in export values. In terms of employment, Pakistan saw an increase despite losses in market share, and Morocco, Sri Lanka and Honduras all saw decreases in employment despite increases in exports. Of the nine countries, Mexico is characterized as faring the worst with significant losses in export values, market share, and employment. A graphical depiction of these results is displayed below in Figure 20.



Source: For export data UN COMTRADE, for employment data various sources see background country papers.
Note:* For employment an average of 2003–05 employment is used for 2004 for Sri Lanka.

Figure 20 Employment changes after the MFA phase-out (Lopez-Acevedo & Robertson, 2012)

The empirical analysis within the report suggests that while changes in employment mostly followed changes in exports, this was not always the case. Both Honduras and Mexico saw significant losses in employment which the authors relate to their reliance on free trade agreements with the US. Both countries also saw decreases in the wage premium³ of working in the T&C sector. It is noted that this may have significant impacts for poverty in Honduras given the wage premium has previously been identified as a critical factor in reducing the country's poverty level.

Interestingly, while Cambodia pursued a path focused on the lower end of the value chain, the government in Sri Lanka worked to focus on higher value-added products. Both saw increases in exports, but while employment increased in Cambodia it is noted to have fallen in Sri Lanka. The authors point to this comparison to highlight the importance of industry structure and policies, noting that “[p]olicies to move up the value chain may cause the industry to move away from precisely those entry-level positions that give opportunities for people to exit poverty, raising the question of what other policies might be needed to complement policies that facilitate moving up the value chain” (p. 149).

Overall, results from this study indicate that the MFA phase-out generated differential employment impacts based on complexities of the global T&C sector related to countries' ties to free trade agreements and their position within the value chain.

³ The difference between average wages in the T&C sector and economy-wide average wages

4.6 A Framework for Exploring the Health Impacts of the MFA Phase-Out

In Chapter 2, it is found that studies relate trade liberalization to health through a variety of labour market conditions like wages, working conditions, job loss, and economic insecurity (e.g. Corrigall et al., 2008; Doyal, 2007; Grown, 2005; Labonté & Schrecker, 2007; Loewenson, 2001; Loewenson et al. 2010). As previously mentioned however, specific liberalizing processes have rarely been identified within this context. The MFA phase-out represents a specific instance of trade liberalization which has had significant impacts on T&C employment patterns across the world. As such, it represents a valuable natural policy experiment for exploring the health impacts of trade liberalization in the context of labour markets.

The preceding sections indicate that the T&C sector is extremely globalized and characterized by international production chains, preferential trading schemes, regional trade agreements, and in less developed countries, by a largely female workforce and precarious employment. These considerations present complex implications for how employment changes after the MFA phase-out might have impacted health. They indicate for example, that employment changes are likely to have affected a diverse range of countries in response to their various positions in the global trading regime. They also indicate a complex set of potential pathways to health. For example, employment growth in the sector may conceivably be health promoting if it means improved material conditions through wages. However, that poor working conditions characterize much of the work in the sector means that there are significant ways in which employment growth may negatively impact health outcomes. In relation to employment loss, we can also conceive of both potentially beneficial and detrimental pathways to health. For example, less exposure to poor working conditions may promote health while loss of income may facilitate health deterioration through worsening material circumstances.

Within the literature focusing on trade liberalization and labour markets, the EMCONET framework (Benach et al., 2007) is found to provide the most comprehensive outline of the pathways leading to health in the context of labour markets. This framework can help to deal with the complex ways employment changes after the MFA phase-out might have impacted health by providing a tool to understand these different considerations in a logical and coherent fashion. The

adapted ecosocial framework presented in Chapter 3 is also useful for thinking about the relationship between the MFA phase-out and health. This will be further discussed in Chapter 5 since it relates to methodological considerations.

As discussed in Chapter 2, both a micro- and a macro-level flowchart are used to illustrate the EMCONET framework (see Figures 21 and 22). Captured within the micro-level are a number of behavioral, psychosocial, and physiopathological pathways. At this level, four main categories of risk exposure (physical, chemical, ergonomic, and psychosocial) are seen to be mediated by social mechanisms and influenced by six different types of employment conditions (full employment, unemployment, precarious employment, informal employment, child labour, and slavery & bonded labour).

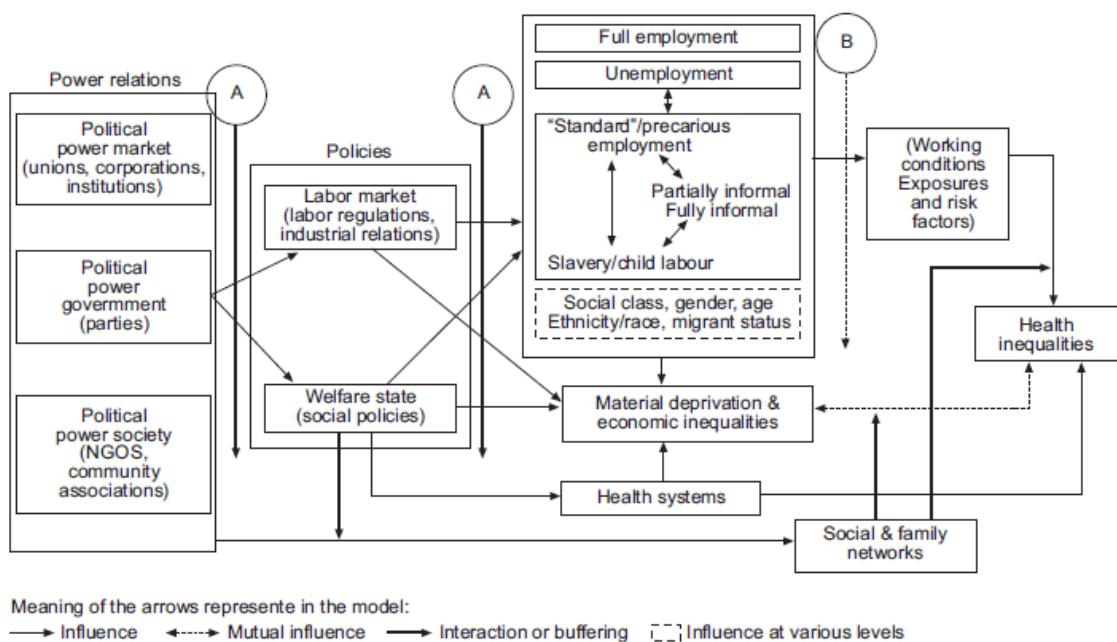


Figure 21 Macro-level framework and policy entry points (Benach, Muntaner, & Santana, 2007)

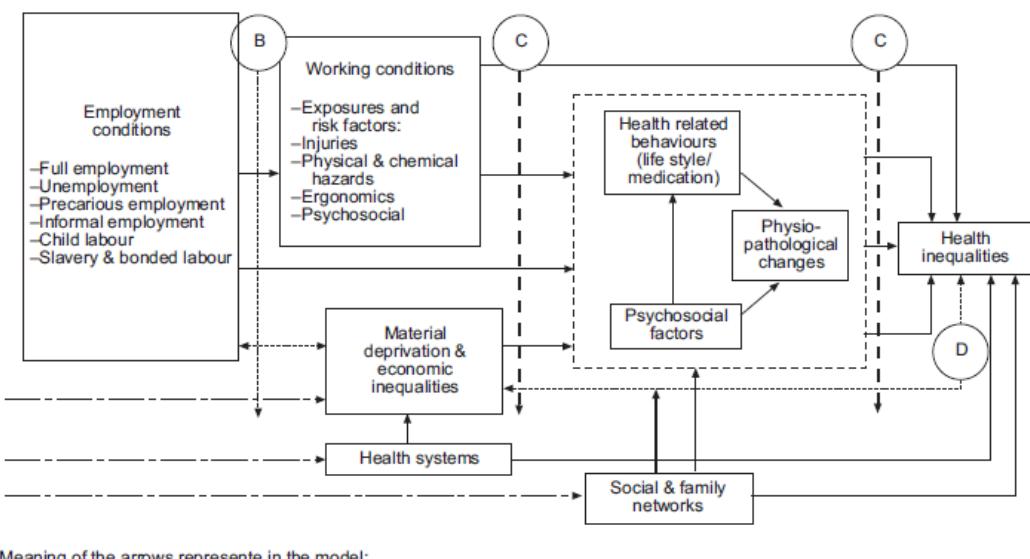


Figure 22 Micro-level framework and policy entry points (Benach, Muntaner, & Santana, 2007)

At the macro-level, the framework focuses on the health importance of protective labour market and welfare state policies. While trade liberalization is not explicitly depicted within the framework, the authors identify the reduction of barriers to trade as one of the main drivers of conditions within this macro-level context.

While the micro-level aspect of the framework encompasses many of the potentially contradictory pathways to health noted above, the macro-level aspect indicates that these various conditions and how they impact health will in turn depend on broader contextual factors such as countries' labour market and welfare state policies. This is important with regards to the overarching perspective of this thesis which is directed at the macro-level and social (fundamental) determinants of health. Moreover, because countries impacted by the MFA phase-out are likely to have different systems of social protection, analysing how important determinants of health and health outcomes changed in these countries after the MFA phase-out can help to answer the first research objective of this thesis which is to identify how trade liberalization and social policy interact to influence health and its social determinants.

CHAPTER 5 METHODS: AN EMPIRICAL CROSS-CASE ANALYSIS

5.1 Introduction

In Chapter 4 it is argued that the health impacts of the MFA phase-out are likely to be characterized by a complex combination of causal considerations. Recognizing this complexity, it was judged that taking advantage of a number of countries' experiences of the MFA phase-out would provide greater insight into how social policies interact with trade liberalization to influence health.

For this reason, the second objective of this thesis is **to investigate and analyse how the phase-out of the Multi-Fibre Arrangement impacted health in countries reliant on the textile and clothing sector for employment (RO2)**.

The concomitant research questions are:

RQ2. How did health outcomes change after the phase-out of the Multi-Fibre in countries reliant on the textile and clothing sector?

RQ3. What are the potential causal mechanisms responsible for these changes?

This chapter will detail the main method used to answer the first of these two research questions. It will begin by briefly describing some methodological considerations for exploring the health impacts of the MFA phase-out. In doing so, it will introduce the methodological value of fuzzy-set qualitative comparative analysis (fsQCA). It will then move to consider broader benefits and limitations of fsQCA. Here the significance of the second research question (RQ3) will become clear. Next, the analytical steps of fsQCA will be discussed, including the selection of cases, health outcomes and causal conditions. Chapter 6 will then present the results of the fsQCA.

5.2 Methodological considerations

While there are many well-known methods for cross-case analyses, the large majority of public health scholarship which evaluates macro-level phenomena via cross-national comparisons has relied on conventional linear regression models. These methods assume the existence of a single, necessary and sufficient, explanatory model, and average evidence across cases to quantify the net effect of each explanatory variable by keeping all others in the analysis constant (Ragin, 2006).

In doing so, these models often neglect to take sufficient account of the contextual dimensions of cases and the interactive effects of causal pathways (Ragin, 2006).

Such methods therefore, do not align well with the EMCONET framework (Benach et al., 2007) which suggests that the health impacts of the MFA phase-out are likely to vary according to different macro-level contextual conditions. They also do not align well with the adapted ecosocial framework of trade liberalization and health, presented in Chapter 3, which characterizes the relationship between trade liberalization and health via reference to a complex set of concurrent and interacting pathways.

For this reason, fuzzy-set qualitative comparative analysis (fsQCA) emerged as the preferred method to answer the second research question of this thesis. This is because in contrast to linear methods, FsQCA requires that a model be specified whereby independent variables are assumed to combine in a way that responds to the unique contextual environments of cases. As an established methodology used in political sciences (for a review see Rihoux et al. (2013)), fsQCA offers an innovative and promising methodological technique towards the objectives of this thesis. It is described in greater depth in the next section.

5.3 Fuzzy-set Qualitative Comparative Analysis

Fuzzy-set qualitative comparative analysis (fsQCA) is a configurational approach grounded in set-theory (Ragin, 2000; Ragin, 2008). That it is configurational means that its focus is on whether specific combinations of causal conditions (configurations) are associated with an outcome of interest. Through the concept of ‘multiple conjunctural causation’, fsQCA recognizes that 1) outcomes are often produced via a combination of conditions, 2) that the same outcome may be produced by different combinations of conditions, and 3) that the context within which conditions combine can influence the type of impact made on the outcome (Rihoux, 2006).

The crux of fsQCA is that it enables logical statements to be made about causal conditions that are either necessary or sufficient for a given outcome. A condition is *necessary* when it must be present for an outcome to occur. Causal conditions are said to be *sufficient* if the outcome occurs whenever the causal conditions are present.

Besides being especially apt at addressing causal complexity, fsQCA is also useful for supporting exploratory analyses and theory development (Grimm, 2006; Ragin & Schneider, 2011). This is because fsQCA is a “case-oriented” analytic method. This means that in contrast to the “variable-oriented” method, it focuses on how conditions influence an outcome in a context-specific manner (Ragin, 2006). This context-specific approach allows for greater exploration into the causal conditions that are associated (or not) with an outcome.

Moreover, in fsQCA there is constant dialogue between theory and evidence (Ragin, 2000). This allows for the identification of inconsistencies in a way which can suggest modifications to the analysis and its surrounding theory. This iterative method is thus extremely useful for theory development. These characteristics of fsQCA are especially important since our understanding of the health impacts of the MFA phase-out is relatively undeveloped.

However, fsQCA also presents some important challenges and limitations. For example, fsQCA requires the researcher to make many subjective decisions which introduces the potential for substantial bias into the analysis. However, this problem is not exclusive to fsQCA, as researcher bias also characterizes variable-oriented techniques (Ragin, 2000). Furthermore, this challenge can be dealt with through complete transparency and careful application of substantive and theoretical knowledge. In the subsequent sections of this chapter, explicit details of the decisions made within each step of the fsQCA will be made clear. Moreover, just as in a traditional regression analysis, the results generated by an fsQCA should be viewed as potentially falsifiable hypotheses to be further tested.

There are also limits to the explanatory power of fsQCA. Recall that fsQCA is focused on identifying whether specific configurations are associated with a certain outcome. To do this, fsQCA looks at all of the logically possible combinations of causal conditions. The number of logically possible combinations of causal conditions grows exponentially with the number of included causal conditions so that there are 2^k possible configurations (combinations of causal conditions), where k represents the number of causal conditions. Consequently, it has been argued that there is a ratio of cases to causal conditions, below which there is a high chance that a fsQCA will find an association due to random variation (Marx & Dusa, 2011). Researchers are thus advised to pay careful attention to both the number of cases and

causal conditions included in a fsQCA. For example, a fsQCA with five causal conditions should ideally include at least 18 cases (Marx & Dusa, 2011). As will be made clearer below, the fsQCA undertaken within this analysis has five causal conditions, and contains well over 18 cases.

Perhaps the main limitation of fsQCA is that, like regression analyses, it identifies associations, not causality. It is for this reason that the third and final research question of this thesis asks which causal mechanisms are responsible for the changes we see in health after the MFA phase-out. As a case-oriented approach, fsQCA can be used to identify particular types of cases for detailed within-case analyses that can focus on identifying causal processes. How this was undertaken to answer the third research question (RQ3) is discussed in the third section of this thesis, beginning with Chapter 7.

5.4 Operationalizing fsQCA

FsQCA can typically be broken down into three different stages. In the first stage, decisions are made regarding the selection of cases, outcome indicators and causal conditions. Included cases are then assigned fuzzy membership scores for each of the outcome indicators and causal conditions. These scores indicate each case's degree of membership in the category formed by the indicator. A fuzzy-set approach responds to the need for variables which can be finely calibrated. Fuzzy scores thus range from 0 to 1, where the former indicates non-membership in the set created by the indicator, and the latter indicates full-membership.

In the second stage of fsQCA, examinations of necessity and sufficiency are undertaken. In the latter analysis a truth table is constructed which outlines all logically possible combinations of causal conditions and their relationship to the outcomes. The truth table also demonstrates which combinations of conditions best describe included cases. In the final stage of fsQCA, a process of 'logical reduction' is undertaken through which a simplified statement is made about which combinations of conditions are necessary and sufficient for an outcome.

This chapter will now move to discuss how these three stages were approached as a means to answer the second research objective of this thesis: **How did health outcomes change after the phase-out of the Multi-Fibre in countries reliant on the textile and clothing sector?**

5.4.1 Stage 1: Outcome Indicators, Case Selection and Causal Conditions

In the first stage, decisions were made regarding the selection of outcome indicators, cases, and causal conditions.

Outcome indicators

As discussed in Chapter 4, the MFA phase-out is likely to have had impacts on health in a range of different ways. An ideal way to explore the health impacts of this liberalization episode would have been to follow up with workers who were impacted by resulting shifts in employment, as well as their families. Unsurprisingly however, this type of data is not readily available. For this reason, it was decided to investigate changes in health at the national, population-level. A central question of this methodological choice is to what extent we can expect health outcomes at the national level to respond to changes in employment in the T&C sector.

There is a relatively robust body of literature in public health which finds evidence for changes in national-level health outcomes as a result of changing macro-economic conditions. For example, there is a substantial amount of research focused on the health impacts of economic crises/recessions (Burgard et al., 2013; Catalano et al., 2011; Suhrcke et al., 2011). A main pathway through which recessions are seen to impact national levels of health is job loss (Stuckler et al., 2009). As described in the previous chapter, there is evidence that some countries experienced severe losses of employment after the MFA phase-out.

Although there is a sizeable body of literature relating macro-economic conditions to changes in health via job loss, fewer studies have measured the effect of employment growth on health (Rueda et al., 2012). However, that employment is considered a fundamental determinant of health means that there are many pathways through which we can expect growth in employment to potentially impact health at the national level (Bambra, 2011; Benach et al., 2007).

Moreover, while much of the literature which deals with the health impacts of changing macroeconomic conditions is focused on the developed world, there is also evidence that such changes can have important implications for national levels of health in poorer countries (Hopkins, 2006; Suhrcke & Stuckler, 2012).

For these reasons, the answer to the question of whether we can expect changes in population health as a result of changes in employment in the T&C sector,

will depend in large part on which health outcomes are explored, how reliant countries are on the T&C sector for employment, as well as how large changes in employment were after the MFA phase-out. For reasons that are discussed below, adult female and infant mortality rates were chosen as the most appropriate outcome indicators to explore the health impacts of the MFA phase-out. Moreover, in ways that will soon be made clearer, steps have been taken to ensure that countries included in this analysis are particularly reliant on the textile and clothing sector for employment. It will be also demonstrated that many countries saw considerably large shifts in their T&C employment after the MFA phase-out.

Female Adult Mortality Rates

Mortality rates were chosen to explore the health impacts of the MFA phase-out on the basis of evidence which links unemployment to mortality (Bambra, 2011; Bartley, Ferrie, & Montgomery, 2006; Bartley & Plewis, 2002; Roelfs, Shor, Davidson, & Schwartz, 2011). Female mortality rates were chosen in particular since the textile and clothing sector workforce is largely female. Another benefit of mortality rates is that they are generally available for a large set of countries, although this data is not without its limitations (as discussed in greater detail below).

A recent meta-analysis finds that unemployment is associated with an increase relative risk of all-cause mortality (Roelfs et al., 2011). In this study, the risk of death among individuals who experienced unemployment is found to be 63% higher than those who did not, after adjustment for age and other covariates. This risk increases to 73% when only the first 5 years of unemployment are considered. However, the magnitudes of these associations are typically greater for men than they are for women, and studies included in this meta-analysis focus exclusively on developed countries.

One possible reason for this gender difference is lower labour force participation rates among women, another is that employment status is more central to men's identities than to women's (Roelfs et al., 2011). However, this first issue is addressed in this case study by focusing on a female dominated industry. Moreover, it would seem that employment is an extremely central aspect of women's identities in the lower- and middle-income countries impacted by the MFA phase-out, since this employment represents an important channel to improved material circumstances (Kabeer, 2000; Lynch, 2007).

Furthermore, Suhrcke and Stuckler (2012) suggest that income shocks, like those resulting from unemployment, are likely to generate even worse health outcomes in poor countries since in these countries people are less likely to have access to social protection, and live closer to or in abject poverty. This idea is supported by evidence from Hopkins (2006) who finds that the East Asian crisis (which was characterized by significant job losses) was associated with (short-lived) increases in the mortality rates of Thailand and Indonesia. While little health impact was found in Malaysia, Hopkins attributes this to the fact that, rather than following the World Bank prescription for adjustment, which included cuts in public spending, the country chose its own path to adjustment that minimized health impacts for example through a fixed exchange rate and capital controls. This finding is aligned with the analytical frameworks used to guide this study, which emphasize the mediating role of contextual features in shaping health outcomes.

Historically, adult mortality rates have been reported by the UN Population Division, the WHO and the World Bank. However, the usefulness of this data has been hindered by a range of well-known weaknesses, due partly to incomplete registrations systems and partly to the dearth of global health research focused on all-cause adult mortality (Hill, 2003; Koyanagi & Shibuya, 2010). These agencies for instance, have relied on models which extrapolate adult mortality from child mortality. This has been identified as especially problematic in the context of HIV/AIDS. Ambiguity in both the sources of data and the methods used, have also hindered replication of results (Koyanagi & Shibuya, 2010). Indeed it has been acknowledged by the World Bank (Bos, Vu, & Stephens, 1992) that documenting short-term fluctuations based on these past methods, let alone linking them to changing socio-economic contexts, requires far greater detail than such methods can afford.

By contrast, authors of the dataset this study draws on, Rajaratnam et al. (2010b), specifically acknowledge that one of the main strengths of the data is that it can be used to better investigate changes in mortality rates over time and in doing so, linked to changes in various socio-economic contexts. Moreover, new advances in estimation techniques are argued to have greatly ameliorated past weaknesses (Koyanagi & Shibuya, 2010).

In the data used for this study, adult mortality is summarized by the probability that an individual who is 15 years old will die before reaching age 60 (45q15 in standard life table notation). It is based on the assumption that the age-specific mortality conditions of the year are constant throughout an individual's life. Mortality rates from 187 countries, from 1970 to 2010, are estimated from a variety of sources including "(1) vital registration data, (2) sample registration systems (when available), and nationally representative survey or census data that enable direct estimation of age-specific adult mortality rates from questions about either (3) deaths in the household or (4) the survival of siblings of a respondent" (Rajaratnam et al., 2010b, p. 1705). Moreover, the methods used demonstrate a higher predictive validity than earlier estimates and are both transparent and replicable (Koyanagi & Shibuya, 2010; Rajaratnam et al., 2010b).

While it has been acknowledged that these estimates are the "best that can done", it has also been cautioned that "in the places where adult mortality is highest, we do not have the kind of data that is required to monitor and evaluate local and international health interventions" (Deaton, 2011, p. 19). Despite these drawbacks, this data has been drawn upon more confidently than other estimates in recent work (see for example, Chongsuvivatwong et al., 2011). Moreover, as will be noted in relation to case selection, countries with high and/or fluctuating levels of uncertainty in their data are excluded from this analysis.

Infant Mortality Rates

Infant mortality rates (IMR) were chosen to explore the health impacts of the MFA phase-out for two main reasons. First, IMR was considered a valuable indicator since employment conditions don't just impact workers but also their families (Bambra, 2011). Although it is unclear what proportion of T&C workers are having children across different countries, the second reason IMR was considered is that it is especially recognized for its rapid response and sensitivity to more macro-level policy changes (Bambra, 2006; Bezruchka, 2012; Ferrarini & Norström, 2010; Reidpath & Allotey, 2003). This means that the MFA phase-out may have impacted IMR both directly, through the employment conditions of T&C workers having children, and indirectly if the phase-out influenced health important conditions at the national level.

Two national level conditions highlighted by the EMCONET framework for their health importance in the context of labour markets are economic inequality and material deprivation (Benach et al., 2007). Both of these conditions may have been impacted through a large shift in T&C employment after the MFA phase-out, through for example, the additional provision of wages to people who were otherwise not earning, or through the loss of wages for those losing employment. Infant mortality rates have been associated with both of these conditions in other studies (Schell, Reilly, Rosling, Peterson, & Ekström, 2007; Wilkinson & Pickett, 2010)

The responsiveness of IMR to macro-level conditions, in addition to its cross-national availability, makes it one of the most widely used comparative indicators of population-level health; however, it is an indicator not without its disadvantages (Mathers, Salomon, & Murray, 2003; Reidpath & Allotey, 2003). Across countries, different classification and reporting protocols can make cross-national comparisons of IMR difficult (Bezruchka, 2012; Howell & Blondel, 1994). Moreover, estimations are often based on small samples of large populations (Reidpath & Allotey, 2003). It has also been argued that IMR fails to successfully capture average population health (Mathers et al., 2003).

For these reasons IMRs are sometimes exchanged for, or supplemented with, other population health measures such as life expectancy, disability-adjusted life expectancy (DALE) and health-adjusted life expectancy (HALE). However, these indicators are also not free from weaknesses. There are concerns, for instance, about the usefulness of life expectancy as a short-term health outcome measure given its inability to respond within any reasonable time to policy changes (Frank & Haw, 2011). Debates also exist over the relative merit of DALE/HALE (Arnesen & Nord, 1999; Gold, Stevenson, & Fryback, 2002; Reidpath & Allotey, 2003).

Despite its drawbacks, IMR continues to be an indicator of high interest in comparative population-level analyses (Bambra, 2006; Chuang, Sung, Chang, & Chuang, 2013). Given its sensitivity to the social determinants of health, such as living conditions and economic status (Reidpath & Allotey, 2003), it is a particularly useful proxy measure of population-level health in the present study. It is also an extremely politically relevant indicator given the Fourth Millennium Development Goal of reducing by two-thirds, between 1990 and 2015, the under-five mortality rate-- of which IMR is one of three identified indicators.

Moreover, the authors of the dataset this study draws on, Rajaratnam et al. (2010a), have recently updated international IMR data for 187 countries from 1970 to 2009. Here IMR is summarized by the probability of death before age 1, conditional on surviving to 1 month. This work improves on previous IMR estimates by using more recent data and new estimation methods which reduce bias and measurement error as well as improve predictive validity. Using this data also allows for cross-country comparisons on infant mortality trends in a way which is both replicable and reduces sources of non-sampling error. Rather than extrapolating from small surveys, the authors pool data from a variety of sources including civil registrations, summary birth histories in censuses, complete birth histories, and survey programmes such as the WHO's Demographic and Health Surveys.

Furthermore, countries with high and/or fluctuating levels of uncertainty in their data are excluded from this analysis, as will be noted later in relation to case selection. Finally, the claim by Mathers et al. (2003) that IMR is not by itself a sufficient indicator of population health is addressed since this study also explores changes in adult female mortality rates.

Case Selection

Countries used for the analysis of the MFA phase-out were selected on the basis of their reliance on the textile and clothing sector for employment. Countries were deemed reliant on the sector if in 2004 (or in the latest year for which data is available between 2000 and 2004), employment in the T&C sector (as a proportion of total manufacturing employment) was greater than 10%, given that more than 10% of the working population is employed in manufacturing. Total manufacturing and T&C sector employment figures were obtained from the United Nations Industrial Development Organization (UNIDO) Industrial Statistics Databases (2011). Data on the proportion of the working population employed in industry were obtained from the 2011 edition of the World Bank Development Indicators.

Table 1 displays the 65 countries which were found to have more than 10% of total manufacturing employment in the T&C sector. Of these 65 countries, three were excluded for having less than 10% of the working population employed in industry: Ethiopia; Madagascar; and the United Republic of Tanzania. Additionally, the following 9 countries were excluded because data on the proportion of the working population employed in industry were not available: Afghanistan; China,

Taiwan Province; Eritrea; Fiji; Iran; Lesotho; Palestinian Territories; Tunisia and Yemen. Therefore, 53 countries were initially considered as reliant on the T&C sector for employment.

Table 1: T&C Employment as a percentage of total manufacturing employment

Country	Year	T&C employment as % of total manufacturing employment*	% of working pop. in Industry ***	Country	Year	T&C employment as % of total manufacturing employment*	% of working pop. in Industry ***
Afghanistan	2004	13.23	NA	Latvia	2004	13.74	27.3
Albania	2004	26.76	13.6	Lesotho	2004	86.86	NA
Azerbaijan	2004	12.92	11.9	Lithuania	2004	21.97	28.2
Bangladesh**	2004	40	13.7	Madagascar	2004	56.02	6.7
Bolivia	2001	14.81	20.5	Mauritius	2004	66.83	33.5
Botswana	2004	33.41	22.6	Mexico	2003	14.42	24.8
Brazil	2004	12.76	21	Mongolia	2004	51.23	16.1
Bulgaria	2004	29.53	32.9	Morocco	2004	41.53	19.5
Cambodia	2000	73.60	10.5	Nepal	2002	28.28	13.4
China	2004	18.11	22.5	Palestinian Territories	2004	21.04	NA
China, Hong Kong SAR	2004	27.90	15.6	Peru	2004	35.60	41.7
China, Macao SAR	2004	82.70	25.2	Philippines	2003	18.54	15.8
China, Taiwan Province	2001	11.12	NA	Poland	2004	10.24	28.8
Colombia	2004	22.30	19.9	Portugal	2004	24.24	31
Costa Rica	2003	17.60	22	Puerto Rico	2000	18.42	19.4
Croatia	2004	13.78	29.8	Qatar	2004	21.51	41
Ecuador	2004	10.87	17.5	Republic of Korea	2004	10.04	27.5
Egypt	2004	28.51	20	Romania	2004	24.29	31.2
Eritrea	2004	20.65	NA	Saudi Arabia	2003	14.75	21
Estonia	2004	17.98	34.9	Serbia & Montenegro	2001	17.82	26.9
Ethiopia	2004	25.34	5.3	Slovakia	2004	10.56	39
Fiji	2004	37.05	NA	South Africa	2004	12.82	26.1
Greece	2004	13.73	22.5	Sri Lanka	2001	49.32	24.1
Guatemala	2004	40.57	19.5	Syrian Arab Republic	2004	25.41	25.6
Hungary	2004	10.19	32.8	Thailand	2002	18.04	20.5
India	2004	21.03	16.1	The former Yugoslav Republic of Macedonia	2004	36.42	32.8
Indonesia	2004	22.90	18	Tunisia	2002	50.60	NA
Iran (Islamic Republic of)	2004	11.06	NA	Turkey	2004	34.55	23
Italy	2004	11.14	30.8	United Republic of Tanzania	2004	10.89	2.6
Jamaica	2004	16.28	18.3	Uruguay	2004	13.14	21.4
Jordan	2004	15.49	21.8	Viet Nam	2004	23.04	17.4
Kuwait	2001	16.75	18.3	Yemen	2004	12.96	NA
Kyrgyzstan	2004	11.48	17.6				

Sources: United Nations Industrial Development Organization (2011): INDSTAT2, Industrial Statistics Database (Edition: 2011). ESDS International, University of Manchester. DOI: 10.5257/unido/indstat2/2011. Industrial Statistics Database 2011 at the 2-digit level of ISIC Code (Revision 3). * ISIC codes 17 for textiles, 18 for wearing apparel and D for total manufacturing. **

Since data was not available on Bangladesh in the UNIDO database, and because the country is oft cited as extremely reliant on the textile and clothing sector, data for Bangladesh taken from the IMF Working Paper by Mlachila and Yang (2004): The End of Textiles Quotas: A Case Study of the Impact on The End of Textiles Quotas on Bangladesh. *** World Bank (2011): World Development Indicators (Edition: September 2011). ESDS International, University of Manchester. DOI: <http://dx.doi.org/10.5257/wb/wdi/2011-09>

Final set of included countries

While 53 countries were initially identified as reliant on the T&C textile sector for employment, the final set of countries used for analysis was significantly smaller with 29 countries analyzed in respect to infant mortality rates, and 27 countries analyzed in respect to adult female mortality rates, yielding a total of 32 unique countries (see Table 2 below for a final list of included countries). This number of cases well exceeds the minimum number of cases below which there is a high chance that a fsQCA will find an association due to random variation (Marx, 2011). As mentioned in the beginning of this chapter, a fsQCA with five causal conditions should ideally include at least 18 cases (Marx, 2011).

Interestingly, some more highly developed countries were identified as reliant on the textile and clothing sector for employment, such as Italy and Portugal.

Inclusion of countries was limited by the quality of mortality data sources, as well as by the availability of data for indicators used to operationalize the causal conditions discussed below. Countries were excluded from the study if mortality data was characterized by relatively high and/or erratic levels of uncertainty as documented in country specific graphs of trend data provided by the authors of the mortality data sets (Rajaratnam et al. 2010ab).

Table 2 Final list of included countries and the type of mortality change investigated

Country	Mortality Change Investigated	Country	Mortality Change Investigated	Country	Mortality Change Investigated
Azerbaijan	IMR	Hungary	Female Mortality	Philippines	Both
Bangladesh	Both	India	Both	Poland	Both
Brazil	Both	Indonesia	IMR	Portugal	Both
Bulgaria	Both	Italy	Both	Republic of Korea	Both
China	Both	Kyrgyzstan	Both	Romania	Female Mortality
Colombia	Both	Latvia	Both	Slovakia	Both
Croatia	Both	Lithuania	Both	South Africa	Both
Ecuador	Both	Mauritius	Both	Sri Lanka	IMR
Egypt	IMR	Mexico	Both	Thailand	Both
Estonia	Female Mortality	Morocco	IMR	Turkey	Both
Greece	Both	Peru	Both		

Causal conditions

There are a variety of approaches that can be used to select causal conditions for inclusion in a fsQCA model (Amenta & Poulsen, 1994). Since the EMCONET framework used to guide this research predicts multiple pathways to health (Benach, et al. 2007) conditions can be seen to be selected via the *conjunctural* approach. In this approach, conditions are expected to combine in different ways to impact an outcome. This approach is described as best aligned with the characteristics of a fsQCA (Amenta & Poulsen, 1994).

The following five causal conditions were selected on the basis of the EMCONET framework and the thesis's focus on macro-level conditions: countries' (1) Level of development; (2) Labour market protection; (3) Welfare state protection; (4) Employment loss after the MFA phase-out (5) Employment growth after the MFA phase-out. Additional details on the choice of these conditions are presented in the following sections.

Assignment of Fuzzy Membership Scores

For each of the outcome indicators and causal conditions selected, scores were assigned which describe each case's degree of membership in the category formed by the indicator. Again, a fuzzy-set approach responds to the need for variables which can be finely calibrated. Fuzzy scores thus range from 0 to 1, where the former indicates non-membership in the set created by the indicator, and the latter indicates full-membership (Ragin, 2008). Final fuzzy-set scores for each of the outcomes and causal conditions were calculated as described below.

Health Outcomes

This study was interested in how adult female and infant mortality rates changed after the MFA phase-out. There are a variety of methods available for analysing changes in mortality rates over time. This study relies primarily on calculations of relative and absolute changes in mortality rates before and after the MFA phase-out. Before these calculations are discussed however, it is first worth considering two other highly relevant methodologies for analysing changes in mortality rates over time and why this present study decided against using them.

Interrupted time series analysis (ITS) is a regression technique frequently used to examine trends over time. It is argued to be one of the strongest quasi-experimental approaches to evaluating the impact of an intervention or event.

Comparing trends before and after an intervention/event, ITS is able both to detect immediate impacts as well as those less sudden (Gillings, Makuc, & Siegel, 1981). Another benefit of an ITS design is that it is able to determine whether changes in trends are large enough to be statistically significant. However, ITS requires 50-100 dependent variable observations over time and data on infant and female mortality rates is available only from the 1970s onwards.

Joinpoint regression is another technique which allows for the assessment of changes in trends over time. One of the major strengths of this methodology is that it is able to identify a point in time in which a significant change in trend has occurred. Generally speaking, joinpoint regression analyzes trend data and breaks it up into different line segments at points where a change in trend is statistically different ($p<0.05$). Using a Monte Carlo Permutation test of significance, the model tests the null hypothesis (H_0 : there are k_0 joinpoints) against the alternative hypothesis (H_1 : there are k_1 joinpoints) (Kim, Fay, Feuer, & Midthune, 2000). When fit on the log scale, the slopes of these line segments are interpretable as the annual percent change in the rate. The number of joinpoints identifiable within an analysis is limited by the number of data points being analysed. The maximum number of joinpoints identifiable for any analysis is 5.

While this technique is appropriately aligned with the objectives of this work, its utility is limited for two main reasons. The first reason relates to data availability issues. In general it is recommended that data over longer periods of time be used for Joinpoint analyses. While the dataset used for this analysis provides infant and female mortality rates from the late 70s, the reliability of this data changes over time (as evidenced by varying levels of uncertainty). In this scenario, it is suggested that the standard errors of the data be included in the analysis. However, while this data was requested from the authors of the datasets used in this analysis, it was not made available at the time of this work.

The second reason why the utility of Joinpoint regression was limited relates to the fact that in many of the countries included in this analysis, mortality rates have gone through periods of dramatic reductions since the 1970s. With this in mind, along with the consideration that only a limited number of joinpoints are able to be identified over the course of the data, it wasn't clear whether the analysis would then be less sensitive to more subtle changes occurring in more recent years.

Relative and absolute changes in mortality rates before and after the MFA phase-out

Relative and absolute changes in mortality rates were calculated from Rajaratnam et al. (2010ab) to capture both immediate and delayed changes in health after the MFA phase-out. Immediate changes are reflected in the differences in mortality rates between 2004 and 2005, while delayed changes were calculated based on the five year period preceding (2000-2004) and following the MFA phase-out (2005-2009). While absolute figures give a precise account of change across countries, relative changes are better at capturing comparative changes over time. These calculations are displayed below across table 3 and 4 in relation to female mortality rates, and across tables 5 and 6 in relation to infant mortality rates.

Adult Female Mortality

Table 3 Absolute Changes in Adult Female Mortality Rates

Country	Adult Female Mortality Rates (per 1000)				Absolute Reduction in Adult Female Mortality Rates			Difference Between Pre & Post MFA Periods
	2000	2004	2005	2009	Pre MFA 2004- 2005	Post MFA (2005- 2009)		
Bangladesh	135.6	126.1	124.8	121.4	1.3	9.5	3.4	-6.1
Brazil	122.4	119	117.9	111.4	1.1	3.4	6.5	3.1
Bulgaria	97.8	91.8	92	88.5	-0.2	6	3.5	-2.5
China	118.6	105.4	102.5	92.5	2.9	13.2	10	-3.2
Colombia	88.7	78.7	76.2	68.6	2.5	10	7.6	-2.4
Croatia	74.9	66.1	64.9	62.9	1.2	8.8	2	-6.8
Ecuador	98.6	90.7	88.7	80.6	2	7.9	8.1	0.2
Estonia	119.2	102	98.7	87.6	3.3	17.2	11.1	-6.1
Greece	48.4	46.5	45.8	42.4	0.7	1.9	3.4	1.5
Hungary	115	107.7	106.6	104	1.1	7.3	2.6	-4.7
India	188.6	166.4	161.7	147.3	4.7	22.2	14.4	-7.8
Italy	50.5	45	44.2	42	0.8	5.5	2.2	-3.3
Korea	61.7	51.2	49.1	42	2.1	10.5	7.1	-3.4
Kyrgyz Republic	154.7	146	145.6	144.4	0.4	8.7	1.2	-7.5
Latvia	120.9	116.7	117.9	120	-1.2	4.2	-2.1	-6.3
Lithuania	105.1	104.5	108.5	115.5	-4	0.6	-7	-7.6
Mauritius	110	108.5	108.1	106.6	0.4	1.5	1.5	0
Mexico	101.4	95.9	94.7	89.8	1.2	5.5	4.9	-0.6
Peru	97.6	95	94.1	82.9	0.9	2.6	11.2	8.6
Philippines	118.8	120.1	119.8	116	0.3	-1.3	3.8	5.1
Poland	86.3	78.3	78.8	78.3	-0.5	8	0.5	-7.5
Portugal	66.4	59.1	56.8	50.2	2.3	7.3	6.6	-0.7
Romania	108.3	100.4	98.5	91	1.9	7.9	7.5	-0.4
Slovak Republic	81.8	77.9	77.4	75.2	0.5	3.9	2.2	-1.7
South Africa	316.5	430.2	444.2	450	-14	-113.7	-5.8	107.9
Thailand	124.9	117.2	114.1	102.7	3.1	7.7	11.4	3.7
Turkey	102.7	92.8	91.2	86.1	1.6	9.9	5.1	-4.8

Table 4 Relative Changes in Adult Female Mortality Rates

Country	Adult Female Mortality Rate (per1000)				Percent Change in Adult Female Mortality Reduction			Difference between pre & post MFA periods (percentage points)
	2000	2004	2005	2009	2004-2005	2000-2004	2005-2009	
Bangladesh	135.6	126.1	124.8	121.4	1.30	7.01	2.72	-4.28
Brazil	122.4	119	117.9	111.4	1.10	2.78	5.51	2.74
Bulgaria	97.8	91.8	92	88.5	-0.20	6.13	3.80	-2.33
China	118.6	105.4	102.5	92.5	2.90	11.13	9.76	-1.37
Colombia	88.7	78.7	76.2	68.6	2.50	11.27	9.97	-1.30
Croatia	74.9	66.1	64.9	62.9	1.20	11.75	3.08	-8.67
Ecuador	98.6	90.7	88.7	80.6	2.00	8.01	9.13	1.12
Estonia	119.2	102	98.7	87.6	3.30	14.43	11.25	-3.18
Greece	48.4	46.5	45.8	42.4	0.70	3.93	7.42	3.50
Hungary	115	107.7	106.6	104	1.10	6.35	2.44	-3.91
India	188.6	166.4	161.7	147.3	4.70	11.77	8.91	-2.87
Italy	50.5	45	44.2	42	0.80	10.89	4.98	-5.91
Korea	61.7	51.2	49.1	42	2.10	17.02	14.46	-2.56
Kyrgyz Republic	154.7	146	145.6	144.4	0.40	5.62	0.82	-4.80
Latvia	120.9	116.7	117.9	120	-1.20	3.47	-1.78	-5.26
Lithuania	105.1	104.5	108.5	115.5	-4.00	0.57	-6.45	-7.02
Mauritius	110	108.5	108.1	106.6	0.40	1.36	1.39	0.02
Mexico	101.4	95.9	94.7	89.8	1.20	5.42	5.17	-0.25
Peru	97.6	95	94.1	82.9	0.90	2.66	11.90	9.24
Philippines	118.8	120.1	119.8	116	0.30	-1.09	3.17	4.27
Poland	86.3	78.3	78.8	78.3	-0.50	9.27	0.63	-8.64
Portugal	66.4	59.1	56.8	50.2	2.30	10.99	11.62	0.63
Romania	108.3	100.4	98.5	91	1.90	7.29	7.61	0.32
Slovak Republic	81.8	77.9	77.4	75.2	0.50	4.77	2.84	-1.93
South Africa	316.5	430.2	444.2	450	-14.00	35.92	-1.31	34.62
Thailand	124.9	117.2	114.1	102.7	3.10	6.16	9.99	3.83
Turkey	102.7	92.8	91.2	86.1	1.60	9.64	5.59	-4.05

In terms of adult female mortality, reductions in rates were taking place across all except two countries prior to the MFA phase-out: the Philippines, where mortality rates increased by 1.1% from 2000-2004; and South Africa, where rates increased by 35.9%. In the period following the MFA phase-out, this trend had reversed in the Philippines, with mortality rates declining by 3.2% between 2005 and 2009. In South Africa however, increases in adult female mortality rates were greatly reduced but not reversed; in the period following the MFA phase-out, the country saw a rise in mortality of 1.3%, a difference of 34.6 percentage points from the previous period.

Besides South Africa, Lithuania and Latvia also saw their adult female mortality rates increase following the MFA phase-out. In Lithuania, adult female mortality rates were reduced by 0.6% in the period prior to the phase-out; however, following the phase-out this trend was reversed and mortality rates increased by 6.5%. Similarly, in Latvia adult female mortality rates were reduced by 3.5% in the period prior to the phase-out; however, this trend was reversed and mortality rates increased by 1.8% following the phase-out.

In terms of more immediate changes directly following the MFA phase-out (between the years of 2004 and 2005), only five countries saw their mortality rates increase: South Africa (by 14%), Lithuania (by 4%), Latvia (by 1.2%), Poland (by 0.5%), and Bulgaria (by 0.2%). In the years following 2005, only South Africa, Latvia and Lithuania continued to have increasing adult female mortality rates.

The Philippines is the only country where adult female mortality rates were increasing prior to the MFA phase-out but reversed in 2005, though the change from 2004 to 2005 was relatively small at 0.3%. In the remaining 21 countries, mortality rates continued to decrease immediately following the MFA phase out, however to varying extents. Six of these 21 countries saw changes between 2004 and 2005 of less than 1% (Kyrgyz Republic, Mauritius, Slovak Republic, Greece, Italy, and Peru); seven had changes between 1-2% (Brazil, Hungary, Croatia, Mexico, Bangladesh, Turkey, and Romania); five had changes between 2-3% (Ecuador, Korea, Portugal, Colombia, and China); Thailand and Estonia saw changes between 3-4% and finally, India saw its adult female mortality rates decrease from 2004 to 2005 by 4.7%.

For the majority of countries which saw immediate reductions in adult female mortality rates between 2004 and 2005, decreases across the period following the phase-out were lower than they were in the period preceding it. This is true for all of the 22 countries which saw immediate reductions with the exception of the following seven: the Philippines, Greece, Peru, Brazil, Romania, Ecuador, Portugal, and Thailand.

Overall, the data indicate that relative changes improved after the MFA phase-out in 10 of the 27 analyzed countries. Some of these improvements were relatively minor, in four of these countries (Romania, Ecuador, Portugal and Brazil), percent changes in adult female mortality rates improved by 0.3 to 2.7 percentage

points after the MFA phase-out. In the remaining countries which saw an improvement in adult female mortality rate reductions (Greece, Philippines, Peru, Thailand, and South Africa), improvements ranged from 3.5 to 34.6 percentage points.

By contrast, 17 countries saw a slowing in their adult female mortality rate reductions. Again the extent of these changes varied, with Mexico experiencing a change of less than 1%; three countries experiencing changes between 1-2% (Colombia, China, and the Slovak Republic); three countries experiencing changes between 2-3% (Bulgaria, Korea and India), Estonia and Hungary experiencing changes between 3-4%; four countries experiencing changes between 4-5% (Turkey, Bangladesh and the Kyrgyz Republic); and five countries experiencing changes greater than 5% (Croatia, Poland, Lithuania, Italy and Latvia).

Infant Mortality Rates

Table 5 Absolute changes in infant mortality rates

Country	Infant Mortality Rate (per 1000)				Absolute Change in Infant Mortality Reduction			Difference Between Pre and Post MFA Periods
	2000	2004	2005	2009	Pre MFA 2004- 2005	Post MFA (2005- 2009)		
Azerbaijan	24.53	19.1	17.76	13.17	1.34	5.43	4.59	-0.84
Bangladesh	23.15	18.71	17.76	14.79	0.95	4.44	2.97	-1.47
Brazil	13.33	10.9	10.39	8.55	0.51	2.43	1.84	-0.59
Bulgaria	7.21	5.49	5.15	4.25	0.34	1.72	0.9	-0.82
China	9.49	6.75	6.17	4.84	0.58	2.74	1.33	-1.41
Colombia	8.92	7.28	6.86	5.33	0.42	1.64	1.53	-0.11
Croatia	2.13	1.79	1.7	1.33	0.09	0.34	0.37	0.03
Ecuador	16.83	14.31	13.71	11.47	0.6	2.52	2.24	-0.28
Egypt	15.82	11.79	10.92	8.08	0.87	4.03	2.84	-1.19
Greece	1.88	1.51	1.45	1.06	0.06	0.37	0.39	0.02
India	22.36	19.44	18.8	16.42	0.64	2.92	2.38	-0.54
Indonesia	17.16	15.12	14.68	12.89	0.44	2.04	1.79	-0.25
Italy	1.45	0.94	0.9	0.78	0.04	0.51	0.12	-0.39
Korea	2.7	2.43	2.29	1.75	0.14	0.27	0.54	0.27
Kyrgyz Republic	21.11	19.38	18.98	17.04	0.4	1.73	1.94	0.21
Latvia	4.79	3.69	3.51	3.23	0.18	1.1	0.28	-0.82
Lithuania	3.89	3.26	3.15	2.63	0.11	0.63	0.52	-0.11
Mauritius	5.02	3.67	3.51	3.12	0.16	1.35	0.39	-0.96
Mexico	12.91	10.75	10.27	8.55	0.48	2.16	1.72	-0.44
Morocco	15.97	12.91	12.22	9.79	0.69	3.06	2.43	-0.63
Pakistan	29.44	27.07	28.15	24.78	-1.08	2.37	3.37	1
Peru	13.93	11.06	10.48	8.58	0.58	2.87	1.9	-0.97
Philippines	11.7	10.5	10.15	8.84	0.35	1.2	1.31	0.11
Poland	2.54	1.98	1.9	1.65	0.08	0.56	0.25	-0.31
Portugal	2.48	1.44	1.27	0.99	0.17	1.04	0.28	-0.76
Slovak Republic	3.59	3.1	2.96	2.31	0.14	0.49	0.65	0.16
South Africa	16.21	23.09	25.1	24.02	-2.01	-6.88	1.08	7.96
Sri Lanka	4.29	3.03	2.83	2.29	0.2	1.26	0.54	-0.72
Thailand	3.06	2.46	2.33	1.87	0.13	0.6	0.46	-0.14
Turkey	14.88	12.71	12.33	10.27	0.38	2.17	2.06	-0.11

Table 6 Relative changes in infant mortality rates

Country	Infant Mortality Rate (per 1000)				Percent Change in Infant Mortality Reduction		Difference between pre and post MFA periods	
	2000	2004	2005	2009	2004-	Pre MFA (2000- 2004)	Post MFA (2005- 2009)	
					2005			
Azerbaijan	24.5	19.1	17.8	13.2	7.02	22.14	25.84	3.71
Bangladesh	23.2	18.7	17.8	14.8	5.08	19.18	16.72	-2.46
Brazil	13.3	10.9	10.4	8.6	4.68	18.23	17.71	-0.52
Bulgaria	7.2	5.5	5.2	4.3	6.19	23.86	17.48	-6.38
China	9.5	6.8	6.2	4.8	8.59	28.87	21.56	-7.32
Colombia	8.9	7.3	6.9	5.3	5.77	18.39	22.30	3.92
Croatia	2.1	1.8	1.7	1.3	5.03	15.96	21.76	5.80
Ecuador	16.8	14.3	13.7	11.5	4.19	14.97	16.34	1.37
Egypt	15.8	11.8	10.9	8.1	7.38	25.47	26.01	0.53
Greece	1.9	1.5	1.5	1.1	3.97	19.68	26.90	7.22
India	22.4	19.4	18.8	16.4	3.29	13.06	12.66	-0.40
Indonesia	17.2	15.1	14.7	12.9	2.91	11.89	12.19	0.31
Italy	1.5	0.9	0.9	0.8	4.26	35.17	13.33	-21.84
Korea	2.7	2.4	2.3	1.8	5.76	10.00	23.58	13.58
Kyrgyz Republic	21.1	19.4	19.0	17.0	2.06	8.20	10.22	2.03
Latvia	4.8	3.7	3.5	3.2	4.88	22.96	7.98	-14.99
Lithuania	3.9	3.3	3.2	2.6	3.37	16.20	16.51	0.31
Mauritius	5.0	3.7	3.5	3.1	4.36	26.89	11.11	-15.78
Mexico	12.9	10.8	10.3	8.6	4.47	16.73	16.75	0.02
Morocco	16.0	12.9	12.2	9.8	5.34	19.16	19.89	0.72
Peru	13.9	11.1	10.5	8.6	5.24	20.60	18.13	-2.47
Philippines	11.7	10.5	10.2	8.8	3.33	10.26	12.91	2.65
Poland	2.5	2.0	1.9	1.7	4.04	22.05	13.16	-8.89
Portugal	2.5	1.4	1.3	1.0	11.81	41.94	22.05	-19.89
Slovak Republic	3.6	3.1	3.0	2.3	4.52	13.65	21.96	8.31
South Africa	16.2	23.1	25.1	24.0	-8.71	-42.44	4.30	46.75
Sri Lanka	4.3	3.0	2.8	2.3	6.60	29.37	19.08	-10.29
Thailand	3.1	2.5	2.3	1.9	5.28	19.61	19.74	0.13
Turkey	14.9	12.7	12.3	10.3	2.99	14.58	16.71	2.12

In terms of infant mortality, reductions in rates were taking place across all countries prior to the MFA phase-out except in South Africa, where mortality rates increased by 42.4% from 2000-2004. In the period following the MFA phase-out, this trend had reversed, with mortality rates declining by 4.3% between 2005 and 2009. Reductions in infant mortality rates continued in all countries in the period following the MFA phase-out, although to varying extents.

South Africa is also the only country which saw an immediate negative change in infant mortality rates directly following the MFA phase-out (between the years of 2004 and 2005), with its IMR increasing by 8.7%. In the remaining 28 countries, IMR continued to decrease immediately following the MFA phase out. Between 2004 and 2005 three of these 26 countries saw changes between 2-3% (Kyrgyz Republic, Indonesia and Turkey); five had changes between 3-4% (India, the Philippines, Lithuania, Greece and Poland); eight had changes between 4-5% (Ecuador, Italy, Mauritius, Mexico, Slovak Republic, Brazil, Latvia, and Croatia); six saw changes between 5-6% (Bangladesh, Peru, Thailand, Morocco, Korea, and Colombia); and finally six saw changes greater than 6% (Bulgaria, Sri Lanka, Azerbaijan, Egypt, China and Portugal).

In contrast to what was found with female mortality rates, for the majority of countries which saw immediate reductions in infant mortality rates between 2004 and 2005, decreases across the period following the phase-out were higher than they were in the period preceding it. This is true for all of the 26 countries which saw immediate reductions with the exception of the following 12: India, Poland, Italy, Mauritius, Brazil, Latvia, Bangladesh, Peru, Colombia, Bulgaria, China and Portugal.

Overall, the data indicate that infant mortality rates improved after the MFA phase-out in 17 of the 29 analyzed countries. Some of these improvements were relatively small, in ten of these countries (Thailand, Indonesia, Lithuania, Egypt, Morocco, Mexico, Ecuador, Kyrgyz Republic, Turkey, and the Philippines) percent changes in IMR improved by 0.1 to 2.6 percentage points after the MFA phase-out. In the remaining seven countries (Azerbaijan, Colombia, Croatia, Greece, Slovak Republic, Korea, and South Africa), improvements ranged from 3.7 to 46.7 percentage points.

By contrast, 12 countries saw a slowing in their IMR reductions. Again the extent of these changes varied, with India and Brazil experiencing a change of less than 1%; Peru and Bangladesh experiencing changes of 2.5%; four countries experiencing changes between 6-10.5% (Sri Lanka, Poland, China, and Bulgaria) and four countries experiencing changes between 15-22% (Italy, Portugal, Mauritius and Latvia).

Two other general points regarding mortality rate changes after the MFA phase are worth noting. First, in general, changes in infant mortality rates were larger than those of female mortality rates. Second, countries which saw improvements in female mortalities rates after the MFA phase-out were not necessarily the same countries which saw improvements in infant mortality rates; similarly countries which saw their female mortality rates worsen were not the same countries which saw worsening IMR.

Fuzzy-set scores for changing adult female and infant mortality rates

Fuzzy membership scores for two outcome sets: a ‘health improving’ and a ‘health worsening’ set were assigned both for adult female and infant mortality rates. It was decided to use relative changes to assign fuzzy-set scores since they are better at capturing comparative changes over time than absolute changes. Relative changes in mortality rates were calculated based on the five-year period preceding (2000-2004) and following the MFA phase-out (2005-2009). In terms of female mortality rates, this selected time period is consistent with studies which show an association between unemployment and adult mortality rates after a similarly short period of time (Bartley et al., 2006; Brenner, 1995; Hopkins, 2006; Lundin, Lundberg, Hallsten, Ottosson, & Hemmingsson, 2010; Mustard et al., 2013; Roelfs et al., 2011). However, as previously mentioned comparable evidence could not be found on the relationship between employment growth and adult mortality.

A ‘direct calibration method’ was used to assign fuzzy membership scores in the outcome sets of ‘health improving’ (Ragin, 2008; Schneider & Wagemann, 2012). In the direct calibration method three thresholds need to be specified which correspond to the qualitative breakpoints of full membership (1), the cross-over point (.5), and full non-membership (0). Once these breakpoints are specified, fuzzy membership scores are assigned by the fsQCA software (version 2.5). Generally speaking, the software calculates scores by translating variable scores into the metric of log odds. The technical details of direct calibration are explained in Ragin (2008).

In relation to female mortality rates the qualitative breakpoints for the health improving set were conceptualized respectively as a 3% increase in mortality rate reduction, a 0% change in mortality rate reduction and a 3% decrease in mortality rate reductions between the pre and post MFA periods. In relation to infant mortality rates these breakpoints were conceptualized respectively as a 4% increase in

mortality rate reduction, a 0% change in mortality rate reduction and a 4% decrease in mortality rate reductions.

Fuzzy-set scores in the membership sets of ‘health worsening’ were taken to be the negation of health improving scores and calculated by subtracting a country’s score in the health improving membership score from 1.

The above breakpoints were chosen with a consideration of the distribution of changes across countries. In relation to female mortality rates only 10 countries saw an improvement in health after the MFA phase-out. Changes of less than 1% seemed too small to deem an improvement, and beyond these smaller improvements there is a break in the data until about the 3% mark. Moreover, a sensitivity analysis was carried out whereby fuzzy-set scores were calibrated and run on both lower and higher breaks points. When thresholds were set at 1% and 2% no changes were seen in the results of the fuzzy-set analysis in regards to health improvement. At a 4% threshold, an additional set of countries were characterized as experiencing a health improvement however, this is because moving to this higher threshold increased the fuzzy-set membership score of countries which did not see an improvement in health. Because it was countries which did not see an improvement in health which were altering these ‘health improving’ results, it was decided against using this higher threshold.

On the other hand, 17 countries saw their adult female mortality rates worsen after the MFA phase-out and unlike health improving data, there is no noticeable break in the health worsening data. Therefore, while the 3% break point seemed appropriate for denoting meaningful changes in the health improving data, for the health worsening data there is a less strong argument for the use of this figure. When the sensitivity analysis was carried out in regards to the membership set of health worsening, using a threshold lower than 3% meant that certain types of countries which were otherwise characterized as experiencing a health worsening change in trend, were no longer characterized this way. This is largely because of increases in the fuzzy scores of countries which did not see a health worsening change in trend. However, it was decided against using a lower threshold for three main reasons. First, the differences in fuzzy membership scores across the different thresholds were relatively small for example, in the case of Ecuador a 2% threshold would mean a fuzzy-set score of 0.16, whereas a 3% threshold would mean a fuzzy-set score of

0.25. Second, many countries saw a greater than 2% decrease in their female mortality rate reductions after the MFA phase-out, therefore while the changes in fuzzy-set membership scores between a 2% and 3% threshold were small, decreasing the threshold would result in less fuzzy-set score diversity. Finally, it seems strange to conclude that while a 3% increase in mortality rate reduction represents a health improvement, a different (and lower) figure would denote a meaningful change in the health worsening data.

In regards to infant mortality rates, similar techniques were used to arrive at the 4% threshold. Many more countries saw an improvement in their reductions of infant mortality rates after the MFA phase-out than was seen in regards to female mortality rates. While breaks in the data were less evident (except at very high levels), in terms of health improvement a noticeable change seemed to occur around 4%. In terms of health worsening, a noticeable change seemed to occur at around 6%. However, sensitivity analyses showed no difference in terms of the results of the fuzzy-set analysis between using a 4% or 6% threshold both in terms of health improving and health worsening outcomes. Moreover, no changes in the overall fuzzy-set results were seen using a 1%, 2%, 3%, or 5% threshold. A 4% threshold was chosen over 6% threshold, since this distributed the range of membership scores more evenly.

Final fuzzy scores for the four health outcome sets are displayed in table 7 below.

Table 7 Fuzzy membership scores for the outcome sets of Health Improving and Health Worsening adult female and infant mortality rates

Country	Difference in adult female mortality rate reductions between pre (2000-2004) and post (2005-2009) MFA periods	Fuzzy Score in Health Improving Set	Fuzzy Score in Health Worsening Set	Difference in infant mortality rate reductions between pre and post MFA periods	Fuzzy Score in Health Improving Set	Fuzzy Score in Health Worsening Set
Azerbaijan	NA	NA	NA	3.71	0.94	0.06
Bangladesh	-4.28	0.01	0.99	-2.46	0.14	0.86
Brazil	2.74	0.94	0.06	-0.52	0.4	0.6
Bulgaria	-2.33	0.09	0.91	-6.38	0.01	0.99
China	-1.37	0.2	0.8	-7.32	0	1
Colombia	-1.30	0.21	0.79	3.92	0.95	0.05
Croatia	-8.67	0	1	5.80	0.99	0.01
Ecuador	1.12	0.75	0.25	1.37	0.74	0.26
Egypt	NA	NA	NA	0.53	0.6	0.4
Estonia	-3.18	0.04	0.96	NA	NA	NA
Greece	3.50	0.97	0.03	7.22	1	0
Hungary	-3.91	0.02	0.98	NA	NA	NA
India	-2.87	0.05	0.95	-0.40	0.43	0.57
Indonesia	NA	NA	NA	0.31	0.56	0.44
Italy	-5.91	0	1	-21.84	0	1
Korea	-2.56	0.07	0.93	13.58	1	0
Kyrgyz Republic	-4.80	0.01	0.99	2.03	0.82	0.18
Latvia	-5.26	0.01	0.99	-14.99	0	1
Lithuania	-7.02	0	1	0.31	0.56	0.44
Mauritius	0.024	0.51	0.49	-15.78	0	1
Mexico	-0.250	0.44	0.56	0.02	0.5	0.5
Morocco	NA	NA	NA	0.72	0.63	0.37
Peru	9.24	1	0	-2.47	0.14	0.86
Philippines	4.27	0.99	0.01	2.65	0.88	0.12
Poland	-8.64	0	1	-8.89	0	1
Portugal	0.63	0.65	0.35	-19.89	0	1
Romania	0.32	0.58	0.42	NA	NA	NA
Slovak Republic	-1.93	0.13	0.87	8.31	1	0
South Africa	34.62	1	0	46.75	1	0
Sri Lanka	NA	NA	NA	-10.29	0	1
Thailand	3.83	0.98	0.02	0.13	0.53	0.47
Turkey	-4.05	0.02	0.98	2.12	0.83	0.17

Countries' Level of Development

A development indicator was included in this analysis to differentiate between countries' level of development when evaluating how causal conditions combine to

influence changes in health outcomes. Membership in the development set was calculated using data from the United Nation's Human Development Index.

The Human Development Index (HDI) is a composite index of life expectancy, literacy and gross national income (GNI) per capita through which countries receive a development score between 0 and 1 (UNDP, 2006). Data from the 2006 United Nation's Human Development Index was used to assign scores in the membership set of Highly Developed Countries. This data reflected the conditions in countries in 2004, the year prior to the MFA-phase-out.

A direct calibration method was used to assign fuzzy membership scores in a way which aligned with the Index's rating of countries into the categories of High Human Development, Medium Human Development and Low Human Development. In the membership set of Highly Developed, the qualitative breakpoints of full membership (1), the cross-over point (.5), and full non-membership (0) were conceptualized as 0.9, 0.8 and 0.5 respectively. All countries receiving a HDI score of less than 0.5 are deemed by the Index as having low human development. The cross-over point was chosen at 0.8 since below this point countries are deemed as having medium human development.

While HDI has been challenged on a variety of accounts (Neumayer, 2001), the criticism most relevant to this analysis posits that the HDI ranking is not sufficiently different from a ranking based on income (Kelley, 1991; McGillivray, 1991). However, it was found that a fuzzy-set similarly calibrated based on countries' GNI per capita, and using the World Bank's categorization of high, upper-middle, and low income countries, was substantially different than the fuzzy-set constructed on the basis of the HDI index. This is illustrated by the scatter plots contained in figures 23-26 below which map the relationships between the two types of fuzzy-set development membership sets and adult female and infant mortality rates in 2004.

To maintain a similar calibration approach, the GNI-based fuzzy membership set was directly calibrated using a full-membership breakpoint of \$12,276 GNI per capita (i.e. the threshold at which the World Bank characterizes a country as high-income); a cross-over point of \$10,000 GNI per capita and a full non-membership breakpoint of \$1,005 GNI per capita (i.e. the threshold at which the World Bank characterizes a country as low-income). Data from the World Bank Development

Indicators Database (2011) was used for this analysis. The cross-over point was chosen at \$10,000 since below this figure the World Bank deems countries as middle-income. In fact, countries with a GNI per capita of \$3,976 to \$12,275 are characterized by the World Bank as upper-middle income. However, using \$10,000 was chosen as a cross-over point instead of \$12,275 to allow for some distance from the threshold at which the World Bank deems countries as high-income.

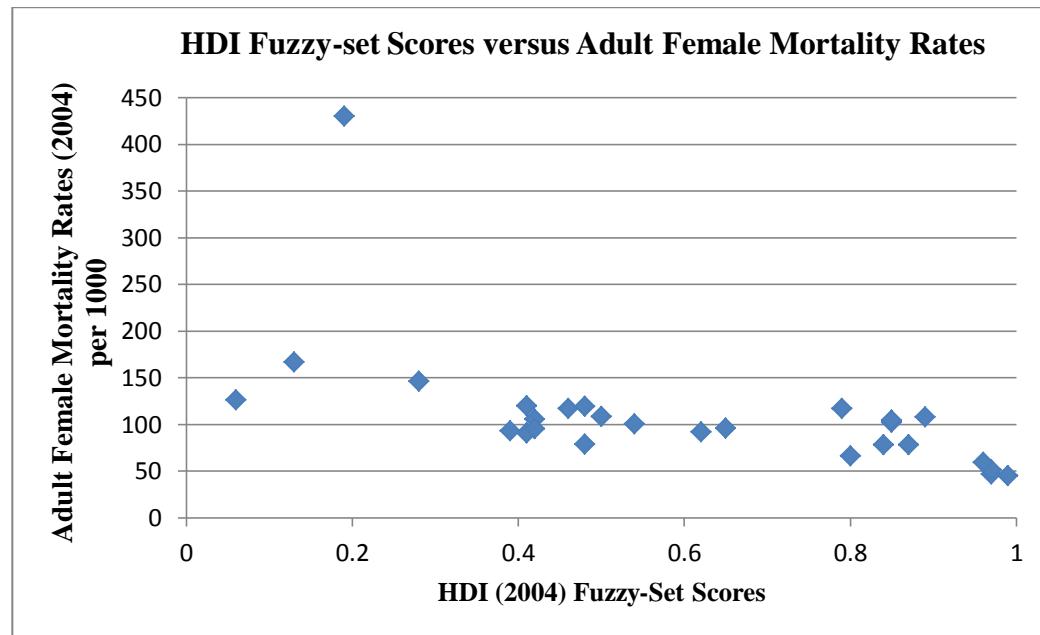


Figure 23 HDI fuzzy-set scores versus adult female mortality rates

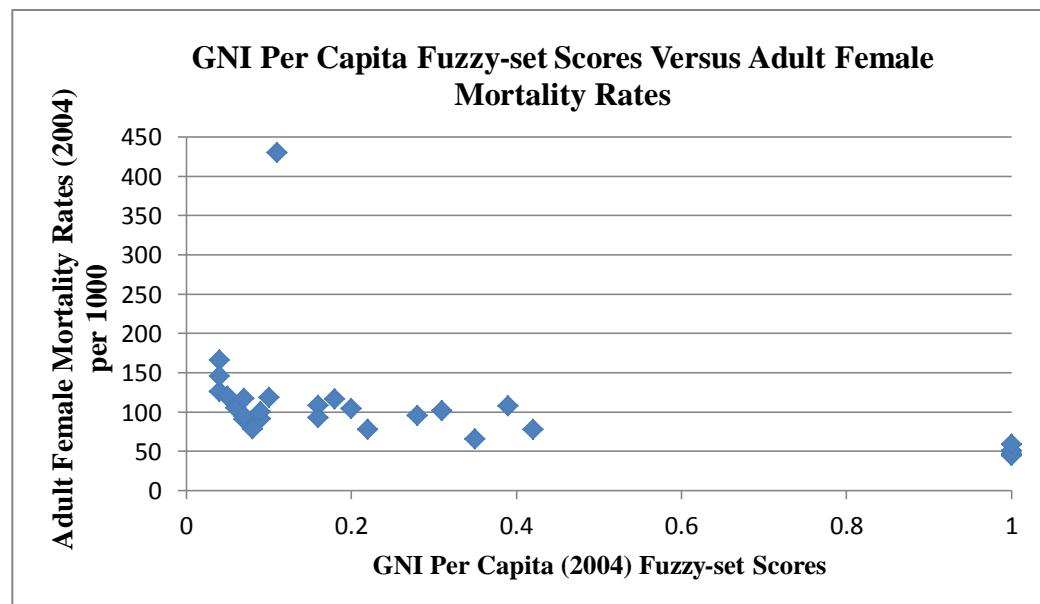


Figure 24 GNI per capita fuzzy-set scores versus adult female mortality rates

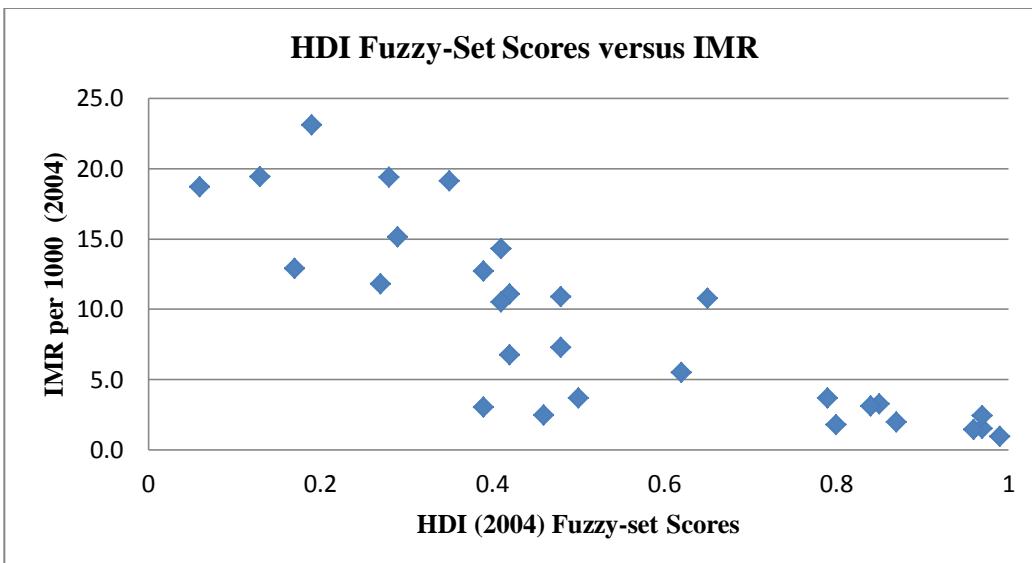


Figure 25 HDI fuzzy-set scores versus IMR

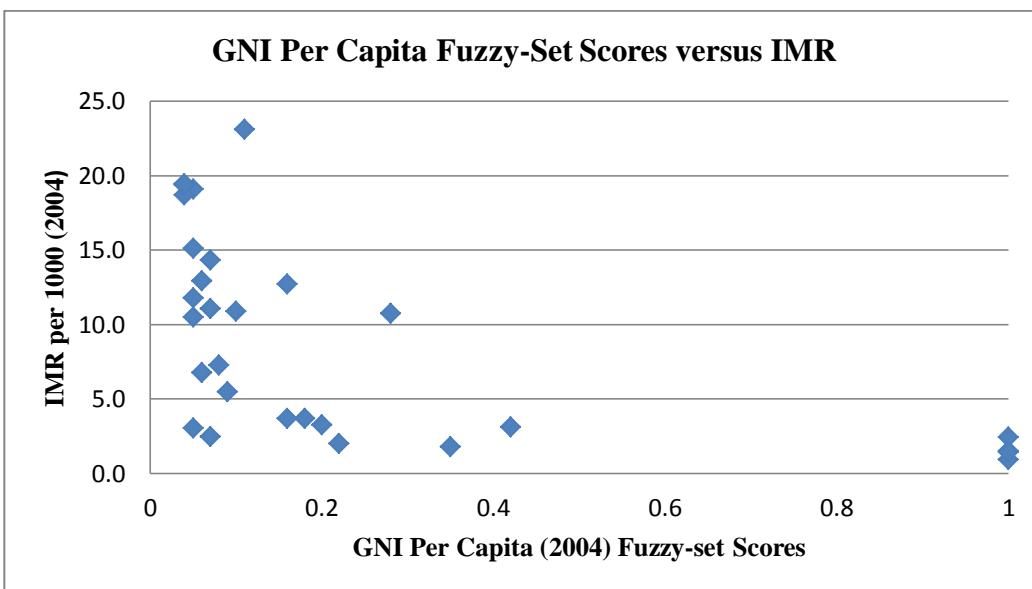


Figure 26 GNI per capita fuzzy-set scores versus IMR

The scatterplots in figures 23-26 also show that the fuzzy-sets constructed on the basis of GNI per capita are also less successful at grouping countries among others with relatively similar health profiles in terms infant mortality rates. For this study, it is important that an indicator of development group countries in this way, given that it may be more difficult for substantial changes in mortality rates to occur in countries with already low rates, and vice versa.

As previously mentioned, a development indicator was included largely to contextualize how changes in employment after the MFA phase-out impacted the health of countries across different levels of development. However, that

development might have changed in countries after the MFA phase-out must also be taken into account. For this reason, how countries HDI ranking changed in the period from 2004-2009 was assessed.

To do so, the HDI ranking of countries from 2005-2009 was obtained from the UNDP International Human Development Indicators Database. However, this data is not directly comparable to the 2004 data obtained from the 2006 Human Development Report. This is because of data revisions and changes in methodology in later reports. While these changes have been applied to data annually from 2005 onwards, for historical data prior to 2005, revisions have only been calculated across five year intervals beginning in 1980.

Therefore, in order to get an idea of how development rankings might have changed within countries between 2004 and 2009, countries' average annual change in HDI was calculated for the years 2005-2009. This average annual change was then used to estimate what the revised 2004 rankings might look like by subtracting the average annual change from the 2005 ranking figure. With this information, it was then possible to calculate countries' 'estimated average HDI ranking from 2004-2009'. An average ranking was calculated since it is more relevant for this analysis to approximate a country's overall development level during this time period than how much a country's development changed. Again this relates back to the purpose of including a development indicator in this analysis: i.e. to contextualize how changes in T&C employment impacted countries' health across different levels of development.

These calculations demonstrate relatively small differences between the 2004 rankings and the estimated averaged ranking from 2004-2009. The construction of an additional development fuzzy-set using the 'estimated-averaged' HDI rankings from 2004-2009, illustrate how minor the differences are for a fuzzy-set analysis. See Table 8 below.

Table 8 Fuzzy-set scores using the ‘estimated-averaged’ HDI rankings from 2004-2009

Country	HDI (2004)		HDI (Estimated and Averaged 2004-2009)		
	Index Score	Fuzzy Score	Averaged Index Score	Fuzzy Score	Fuzzy Score Difference
Azerbaijan	0.736	0.35	0.736	0.35	0
Bangladesh	0.53	0.06	0.486	0.04	0.02
Brazil	0.792	0.48	0.715	0.3	0.18
Bulgaria	0.816	0.62	0.768	0.42	0.2
China	0.768	0.42	0.673	0.22	0.2
Colombia	0.79	0.48	0.706	0.28	0.2
Croatia	0.846	0.8	0.798	0.5	0.3
Ecuador	0.765	0.41	0.715	0.3	0.11
Egypt	0.702	0.27	0.638	0.17	0.1
Estonia	0.858	0.85	0.834	0.73	0.12
Greece	0.921	0.97	0.871	0.89	0.08
Hungary	0.869	0.89	0.819	0.64	0.25
India	0.611	0.13	0.535	0.07	0.06
Indonesia	0.711	0.29	0.610	0.13	0.16
Italy	0.940	0.99	0.880	0.92	0.07
Korea	0.912	0.97	0.885	0.93	0.04
Kyrgyz Republic	0.705	0.28	0.621	0.14	0.14
Latvia	0.845	0.79	0.804	0.53	0.26
Lithuania	0.857	0.85	0.810	0.57	0.28
Mauritius	0.800	0.5	0.728	0.33	0.17
Mexico	0.821	0.65	0.765	0.41	0.24
Morocco	0.640	0.17	0.577	0.1	0.07
Peru	0.767	0.42	0.714	0.3	0.12
Philippines	0.763	0.41	0.652	0.18	0.23
Poland	0.862	0.87	0.810	0.57	0.3
Portugal	0.904	0.96	0.815	0.61	0.35
Romania	0.805	0.54	0.772	0.43	0.11
Slovak Republic	0.856	0.84	0.828	0.7	0.14
South Africa	0.653	0.19	0.613	0.13	0.06
Sri Lanka	0.755	0.39	0.686	0.24	0.15
Thailand	0.784	0.46	0.686	0.24	0.22
Turkey	0.757	0.39	0.696	0.26	0.13

Because these results suggest that incorporating changes in HDI rankings over time would only marginally change fuzzy-set scores, it was then decided to use the original 2004 HDI rankings data (from the 2006 Human Development Report) to construct the development fuzzy-set as previously explained. This is because these calculations are more straight forward and do not rely on estimations.

Final fuzzy scores for countries' level of development are displayed in table 9 below.

Table 9 Fuzzy-set membership scores in the set of Highly Developed Countries

Country	HDI Index Score (2004)	Fuzzy Score
Azerbaijan	0.736	0.35
Bangladesh	0.53	0.06
Brazil	0.792	0.48
Bulgaria	0.816	0.62
China	0.768	0.42
Colombia	0.79	0.48
Croatia	0.846	0.8
Ecuador	0.765	0.41
Egypt	0.702	0.27
Estonia	0.858	0.85
Greece	0.921	0.97
Hungary	0.869	0.89
India	0.611	0.13
Indonesia	0.711	0.29
Italy	0.94	0.99
Korea	0.912	0.97
Kyrgyz Republic	0.705	0.28
Latvia	0.845	0.79
Lithuania	0.857	0.85
Mauritius	0.8	0.5
Mexico	0.821	0.65
Morocco	0.64	0.17
Peru	0.767	0.42
Philippines	0.763	0.41
Poland	0.862	0.87
Portugal	0.904	0.96
Romania	0.805	0.54
Slovak Republic	0.856	0.84
South Africa	0.653	0.19
Sri Lanka	0.755	0.39
Thailand	0.784	0.46
Turkey	0.757	0.39

Protection of Labour Market and Welfare State Policies

The level of protection offered by labour markets and welfare states is an important determinant of health in the EMCONET framework (Benach et al., 2007). This framework identifies three health important characteristics of labour markets:

labour regulations, collective bargaining and the power of trade unions. Due to the dearth of internationally available data on the latter two characteristics, labour regulation is the main characteristic explored for the purposes of this fsQCA. Labour regulation is defined by the authors as referring “both to the specific regulation of the labour market (employment protection legislation) and to welfare state benefits related to the salaried relationship, such as benefits for those involuntarily leaving the labour market, for example, income security measures for the unemployed” (Benach, Muntaner, & Santana, 2007 p. 30). Recognizing the significant overlap between labour markets and welfare states, the authors draw on Esping-Andersen and Regini’s (2001) work in highlighting that “the welfare state and the labour market are two institutions deeply inter-connected and it is not possible to understand the labour market without considering the welfare state institutions that surround it” (Benach et al., 2007 p. 31).

To allow for a better understanding of how both labour markets and welfare states combine conjunctively with other causal conditions, labour regulation is explored in this analysis across the domains of labour market protection, and welfare state protection independently.

Labour Market Protection

Cross-country investigations often use ratification of ILO Conventions as a proxy indicator of labour standards (Block, 2005). While the ILO Conventions are an internationally recognized benchmark of employee protection, ratification as an indicator it is not without its drawbacks. It’s main drawback is acknowledged by Block (2005) who highlights that because not all countries will have the same capacity to implement and enforce conventions, “there is likely to be substantial measurement error in any variable that considers labour standards to be roughly equivalent in two or more countries that have ratified the same Conventions” (Block, 2005, p. 11). Indeed, as acknowledged by both Block (2005) and Rodrick (1996), while many less developed countries have ratified more Conventions than the United States, it seems unreasonable to assume that they have better labour standards.

Despite this drawback, ratification of ILO conventions has been described as a reliable way of measuring labour market protection in less developed countries and that “it is fair to assume … that labour market protections will be relatively low in countries that have ratified a very low number of ILO conventions (Rudra, 2007, p.

388). For this reason, the level of labour market protection was measured and calibrated based on the number of fundamental ILO Conventions ratified by a country. The Fundamental ILO conventions are:

- Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87)
- Right to Organise and Collective Bargaining Convention, 1949 (No. 98)
- Forced Labour Convention, 1930 (No. 29)
- Abolition of Forced Labour Convention, 1957 (No. 105)
- Minimum Age Convention, 1973 (No. 138)
- Worst Forms of Child Labour Convention, 1999 (No. 182)
- Equal Remuneration Convention, 1951 (No. 100)
- Discrimination (Employment and Occupation) Convention, 1958 (No. 111)

A six-value fuzzy-set was used to assign membership in the set of Protective Labour Market Policies. This membership set takes into account both the number of fundamental Conventions ratified in 2004, before the MFA phase-out, as well as additional ratifications that were made following the phase-out. The decision was made to incorporate changes in ratification after the MFA phase-out since the health impact of these protections would still be important following the liberalization episode. However, evidence was not found which suggested that labour market protections changed in countries in specific response to the MFA phase-out.

Countries that had ratified all 8 of the fundamental Conventions by 2004 were assigned a fuzzy membership score of 1, indicating full membership in the set of Protective Labour Market Policies; countries that had ratified 7 of the fundamental conventions by 2004 were assigned a membership score of 0.6, unless they had ratified the final Convention before 2009, in which case they were assigned a membership score of 0.8. A membership score of 0.6 indicates membership “more or less” in the set, whereas a membership score of 0.8 indicates a country is qualitatively “mostly in” the set. Countries which ratified 6 of the fundamental Conventions were assigned a membership score of 0.4 indicating they are “more or less” out of the set. However, again if these countries ratified the final 2 Conventions before 2009 they were assigned a membership of 0.8; if they ratified 1 further Convention before 2009 they were assigned a membership score of 0.6. Countries

were assigned a membership score of 0.2 if they ratified 4-5 of the Fundamental Conventions by 2004, indicating that they are “mostly out” of the set of countries with Protective Labour Market Policies. One country within this group, Latvia, had ratified all 8 Conventions by 2006 and thus was assigned a membership score of 0.8. Finally, countries were assigned a membership score of 0 if they had ratified 3 or less of the fundamental conventions by 2004. However, one country within this group, China, had ratified an additional Convention in 2006 and so was assigned a membership score of 0.2.

Final fuzzy scores for countries’ labour market protection are displayed in table 10 on the next page.

Table 10 Fuzzy membership scores in the set of Protective Labour Market Policies

Country	Freedom of association		Forced labour		Discrimination		Child labour		Fuzzy Score
	C087	C098	C029	C105	C100	C111	C138	C182	
Azerbaijan	1992	1992	1992	2000	1992	1992	1992	2004	1
Bangladesh	1972	1972	1972	1972	1998	1972		2001	0.6
Brazil		1952	1957	1965	1957	1965	2001	2000	0.6
Bulgaria	1959	1959	1932	1999	1955	1960	1980	2000	1
China					1990	2006	1999	2002	0.2
Colombia	1976	1976	1969	1963	1963	1969	2001	2005	0.8
Croatia	1991	1991	1991	1997	1991	1991	1991	2001	1
Ecuador	1967	1959	1954	1962	1957	1962	2000	2000	1
Egypt	1957	1954	1955	1958	1960	1960	1999	2002	1
Estonia	1994	1994	1996	1996	1996	2005	2007	2001	1
Greece	1962	1962	1952	1962	1975	1984	1986	2001	1
Hungary	1957	1957	1956	1994	1956	1961	1998	2000	1
India			1954	2000	1958	1960			0.2
Indonesia	1998	1957	1950	1999	1958	1999	1999	2000	1
Italy	1958	1958	1934	1968	1956	1963	1981	2000	1
Korea					1997	1998	1999	2001	0.2
Kyrgyzstan	1992	1992	1992	1999	1992	1992	1992	2004	1
Latvia	1992	1992	2006	1992	1992	1992	2006	2006	0.8
Lithuania	1994	1994	1994	1994	1994	1994	1998	2003	1
Mauritius	2005	1969	1969	1969	2002	2002	1990	2000	0.8
Mexico	1950		1934	1959	1952	1961		2000	0.4
Morocco		1957	1957	1966	1979	1963	2000	2001	0.6
Peru	1960	1964	1960	1960	1960	1970	2002	2002	1
Philippines	1953	1953	2005	1960	1953	1960	1998	2000	0.8
Poland	1957	1957	1958	1958	1954	1961	1978	2002	1
Portugal	1977	1964	1956	1959	1967	1959	1998	2000	1
Romania	1957	1958	1957	1998	1957	1973	1975	2000	1
Slovakia	1993	1993	1993	1997	1993	1993	1997	1999	1
South Africa	1996	1996	1997	1997	2000	1997	2000	2000	1
Sri Lanka	1995	1972	1950	2003	1993	1998	2000	2001	1
Thailand			1969	1969	1999		2004	2001	0.2
Turkey	1993	1952	1998	1961	1967	1967	1998	2001	1

Welfare State Protection

While welfare states certainly encompass more than income security measures, this analysis focused on this element since it is identified in EMCONET framework (Benach et al., 2007) as fundamental in shaping health outcomes. Welfare state protection was thus measured and calibrated using data from the ILO income

security index (ILO, 2004). This index is calculated using a range of input, process and outcome indicators.

In terms of input indicators, a country is given a positive value if it has ratified the following ILO conventions: No 102 on Social Security (Minimum Standards), No 26 on Minimum Wage-Fixing Machinery, No. 131 on Minimum Wage Fixing, No 9 on Protection of Wages. Two dummy variables are also included, with positive values given for the existence of a minimum wage law and for the existence of laws promoting or legitimizing collective bargaining.

The selected process indicators are social security expenditure as a share of GDP, and two dummies where a positive value is given for the existence of an unemployment benefits scheme and for the existence of a state pension.

The outcome indicators are the national poverty rate, GDP per capita and the Gini coefficient, a measure of foreign indebtedness (“to reflect a country’s vulnerability to a sudden loss of what-ever level of national income security it has achieved” p. 135), life expectancy at birth, the wage share in total value added (“representing the extent of a relatively secure form of income earning” p. 135), the old-age income security index from the SES security Database (“reflecting the security of non-work income for mainly retired workers”) and finally, the ratio of average female to male income (“as a proxy for wage differentials, gender discrimination and disadvantage of female workers” p. 136).

In calculating the index, indicators are normalized and then added together with outcome indicators given twice the weight of the other two. Based on the construction of this index countries are grouped into one of four clusters, “Pacesetters”, “Conventionalists”, “Pragmatists” or the “Much-to-be-done”. Pacesetting countries are characterized as scoring highly both on input and process indicators as well as on outcome indicators. Conventional countries are characterized as scoring highly on input and process indicators but low on outcome indicators. Pragmatists are characterized as scoring low on input and process indications but high on outcome indicators, and Much-to-be-done countries are characterized as scoring low both on the process/input indicators and on outcome indicators.

Rather than using the actual index score for each country, it was these categorizations which were used to assign membership scores in the fuzzy-set of countries with Protective Welfare State Policies. This is for multiple reasons.

First, the categories clearly delineate important qualitative features of countries. The ranking of countries however, does not strictly follow these clusters—Madagascar for instance, is clustered as a Conventional country but on the index, scores lower than other Much-To-Be-Done countries. Albania, a Much-To-Be-Done country, scores higher on the index than many Conventional countries. Slovakia, a Pacesetter country, scores lower on the index than other Pragmatist and Conventional countries. Related to this is the fact that two countries can score very similarly on the index but be qualitatively very different. As a Pacesetter, Slovakia for instance, has an index score of 0.626 while Estonia, as a Pragmatist, has index score of 0.627. Therefore calibrating membership scores on the basis of index scores would cloud important qualitative differences among countries.

Moreover, such qualitative differences are important theoretically for how the welfare state is understood to impact health. For instance, while outcome indicators are meant to represent the effectiveness of input and process indicators, the authors of the index note that for some countries, despite having formal policies and institutions to promote income security, other economic realities can “make outcomes less than satisfactory” (p. 136). Therefore, while a Pacesetter country might score lower on the index than a Pragmatist country (with low scores on input and process indicators), it is in the Pacesetter country, scoring relatively high on all three types of indicators, where we would expect a more health conductive socio-political context.

For these reasons, a four-value fuzzy-set was used whereby Pacesetter countries were assigned a membership score of 1, Conventional countries were assigned a membership score of .67, Pragmatist countries were assigned a membership score of .33, and Much-To-Be-Done countries were assigned a membership score of 0.

While it is possible that income security measures changed in countries from 2004-2009, such changes would have needed to be relatively drastic to change a country’s broader categorization in reference to the breakpoints used above. As such

it seems reasonable to expect that such drastic changes would have been rare. Moreover, in the literature on the MFA phase-out signals were not found that countries were altering their social policies in an anticipatory way.

Final fuzzy scores for countries' welfare state protection are displayed in table 11 below.

Table 11 Fuzzy-set membership scores in the set of Protective Welfare State Policies

Country	ISI (2004)	Category	Fuzzy Score
Azerbaijan	0.424	Much to be done	0
Bangladesh	0.365	Much to be done	0
Brazil	0.586	Conventional	0.67
Bulgaria	0.658	Conventional	0.67
China	0.428	Much to be done	0
Colombia	0.335	Much to be done	0
Croatia	0.679	Conventional	0.67
Ecuador	0.464	Conventional	0.67
Egypt	0.505	Much to be done	0
Estonia	0.627	Pragmatist	0.33
Greece	0.594	Pragmatist	0.33
Hungary	0.672	Pragmatist	0.33
India	0.288	Much to be done	0
Indonesia	0.328	Much to be done	0
Italy	0.681	Pragmatist	0.33
Korea	0.666	Pragmatist	0.33
Kyrgyzstan	0.371	Much to be done	0
Latvia	0.694	Pacesetter	1
Lithuania	0.622	Pragmatist	0.33
Mauritius	0.654	Conventional	0.67
Mexico	0.555	Conventional	0.67
Morocco	0.331	Much to be done	0
Peru	0.356	Much to be done	0
Philippines	0.432	Conventional	0.67
Poland	0.692	Pacesetter	1
Portugal	0.738	Pacesetter	1
Romania	0.514	Conventional	0.67
Slovakia	0.626	Pacesetter	1
South Africa	0.487	Conventional	0.67
Sri Lanka	0.502	Conventional	0.67
Thailand	0.408	Much to be done	0
Turkey	0.567	Conventional	0.67

Changes in T&C Employment Following the MFA Phase-out

After the MFA phase-out, countries reliant on the T&C sector could either have 1) experienced no change in their T&C related employment; 2) experienced growth in T&C related employment; or 3) experienced loss in T&C related employment. Because employment growth can impact health through different pathways than employment loss, two membership sets were constructed for each type of change. Constructing two membership sets was necessary since a single membership set was unable to account for countries' qualitatively different experiences. For instance, a single membership set of Employment Growth would theoretically assign similar membership scores to two countries with very different employment losses. This is because any country experiencing employment loss would largely be conceptualized outside of the membership set of Employment Growth; and likely designated a score of (or close to) 0. However, an employment loss of 5% in a T&C reliant country will have very different health implications than a loss of 50%.

A direct calibration method was used to assign fuzzy membership scores for changes in T&C employment. While it is unclear precisely how much of a change in employment might be important for health, qualitative thresholds were chosen with a consideration of the data, that is the variation of change across included counties. They were also chosen at points where qualitative differences between countries experiences seemed meaningful and with a consideration that changes would need to be somewhat significant to influence health at the population level.

For the membership sets of Employment Growth and Employment Loss, scores were calibrated based on percent changes in employment in the T&C sector between 2004 and 2008, or the closest years for which data was available. Again, in the direct calibration method three thresholds need to be specified which correspond to the qualitative breakpoints of full membership (1), the cross-over point (.5), and full non-membership (0). For the Employment Growth membership set, these thresholds were conceptualized at a 15% increase, a 5% increase, and 0% increase, respectively. For the Employment Loss membership set, these thresholds were conceptualized at a 15% *decrease*, a 5% *decrease*, and a 0% *decrease*, respectively. Employment figures were obtained from the United Nations Industrial Development Organization (UNIDO) Industrial Statistics Databases (2011). However, figures were

not available from UNIDO for Bangladesh and Mexico and so were taken from Lopez-Acevedo & Robertson (2012).

Final fuzzy scores for countries' changes in employment are displayed in table 12 below.

Table 12Fuzzy membership scores in the sets of Employment Growth and Employment Loss

Country	Years	Change in Employment (percentage)	Fuzzy-set Employment Growth	Fuzzy-set Employment Loss
Azerbaijan	2004-2008	-19.78	0	0.99
Bangladesh	2004-2008*	40.00	1	0
Brazil	2004-2007	11.86	0.89	0
Bulgaria	2004-2008	-17.88	0	0.98
China	2004-2008	18.03	0.98	0
Colombia	2004-2005	-4.07	0	0.36
Croatia	2004-2008	-18.06	0	0.98
Ecuador	2004-2008	3.04	0.24	0.01
Egypt	2004-2006	-1.53	0.02	0.11
Estonia	2004-2008	-34.05	0	1
Greece	2004-2008	-3.49	0.01	0.29
Hungary	2004-2008	-41.56	0	1
India	2004-2008	21.31	0.99	0
Indonesia	2004-2008	8.62	0.75	0
Italy	2004-2008	-13.29	0	0.92
Kyrgyzstan	2004-2008	-27.22	0	1
Latvia	2004-2008	-32.26	0	1
Lithuania	2004-2008	-39.01	0	1
Mauritius	2004-2008	-14.82	0	0.95
Mexico	2004-2008*	-35.00	0	1
Morocco	2004-2008	-8.37	0	0.73
Peru	2004-2008	-16.20	0	0.97
Philippines	2003-2006	-6.75	0	0.63
Poland	2004-2008	-8.42	0	0.74
Portugal	2004-2008	-12.05	0	0.89
Korea	2004-2006	-12.17	0	0.9
Romania	2004-2008	-39.96	0	1
Slovakia	2004-2008	-21.24	0	0.99
South Africa	2004-2008	-32.16	0	1
Sri Lanka	2001-2008	80.51	1	0
Thailand	2002-2006	8.06	0.71	0
Turkey	2004-2006	-0.29	0.04	0.06

5.4.2 Stage 2: Examining Necessity and Sufficiency

In the second stage of fsQCA, an examination of necessity and sufficiency is undertaken.

As noted in the beginning of this chapter, for a condition to be *necessary* it must be present for an outcome to occur. A condition, or combination of conditions, is said to be *sufficient* if the outcome occurs whenever the causal condition(s) are present. Because it is rare for conditions or combinations of conditions to conform exactly to a precise subset relation of necessity or sufficiency, fsQCA offers two measurements of how well cases fit a subset relation: consistency and coverage (Ragin 2006, 2008)

Consistency measures the degree to which a subset relation of necessity or sufficiency is met. For an analysis of necessity, consistency scores indicate the degree to which cases with an outcome Y, agree in displaying condition X. A fuzzy subset relation will exist when membership scores in an outcome Y are *consistently* lower than those for the condition X. For an analysis of sufficiency, consistency scores indicate the degree to which cases with a specific configuration agree in displaying the outcome under investigation (Ragin, 2008). A fuzzy subset relation will exist when membership scores in a configuration are *consistently* lower than those for the outcome. Consistency scores range from 0 to 1, where 0 indicates no consistency and 1 indicates perfect consistency. For this analysis consistency scores were calculated by the fsQCA software (version 2.5).

Coverage scores, by contrast, provide a measure of *empirical relevance* after a subset relation of either necessity or sufficiency has been established (Ragin 2006, 2008). In other words coverage scores measure how well a consistent subset “covers” the superset. In the case of necessary causes, coverage indicates the degree to which the cause is relevant to the outcome. In the case of sufficiency, coverage indicates the degree to which the cause explains all occurrences of the outcome. As with consistency scores, coverage scores range from 0 to 1, where 0 indicates no coverage and 1 indicates full coverage. For this analysis consistency scores were calculated by the fsQCA software (version 2.5).

Analysis of Necessity

An analysis of necessity is typically undertaken prior to an analysis of sufficiency. It is suggested that when testing conditions for their necessity, the

threshold for consistency should be greater than 0.9 (Schneider & Wagemann, 2012) and that for coverage it should not be too low (<0.5). It is also important to recognize that no cause should be taken as necessary, independent of a theory that recognizes it as a relevant cause (Ragin, 2008).

Analysis of Sufficiency

Sufficiency is examined through the construction of a truth table which outlines all logically possible combinations of causal conditions (configurations). As previously mentioned, with fsQCA there are 2^k possible configurations, where k represents the number of selected causal conditions. The fsQCA undertaken here, with five conditions, thus has 32 possible combinations.

The truth table also outlines the empirical instances of configurations, as well as their relationship to the outcome indicators. In fuzzy-sets, cases have varying degrees of membership scores in each configuration. A case's membership score in a configuration is calculated by taking the minimum membership score of all the conditions within the configuration. In other words, if a case has a membership score of 0.6 in causal condition A, and a membership score of 1 in causal condition B, its membership score in the configuration AB is 0.6.

It is also important to note that for each membership score a case has in a causal condition, it also has a correlated score in the negation of that condition. The case's membership in the negation of a condition is calculated by subtracting from 1, the case's membership score in the non-negated condition. For example, a case with a membership score of 0.6 in causal condition A will have a membership score of 0.4 in the condition a (not A). Based on fuzzy-set logic, each case can only score greater than 0.5 in one configuration. Combinations of conditions which have no empirical instances are deemed 'logical remainders', a common trait of social science research (Ragin, 2000).

The relationship a configuration has to an outcome can either be set-theoretic in nature (i.e. sufficient for the outcome) or contradictory. Again, a configuration which is set-theoretic in nature is designated as having a subset relation to the outcome. This "is important because it signifies an explicit connection between a combination of causal conditions and an outcome" (Ragin, 2008, p. 137).

The determination of whether a configuration is set-theoretic or contradictory depends on the consistency score of the configuration and the threshold set by the researcher as demonstrating a basis for a set-theoretic relation. As previously described, consistency scores indicate the degree to which cases in a specific configuration agree in displaying the outcome under investigation (Ragin, 2008).

This study deems a sufficient set-theoretic relation present when a configuration has an observed consistency score of 0.75 or greater. Ragin (2008) argues that this is the minimum basis on which a configuration can be claimed to have a set-theoretic relationship with an outcome. Moreover, upon examination of the data, this threshold was consistent with the empirical gaps between consistency values and thus the 0.75 minimum is maintained as an appropriate choice (Schneider & Wagemann, 2010).

Because configurations need not have perfect consistency scores to demonstrate set-theoretic relations, some configurations might contain ‘contradictory cases’ (i.e. cases that have a different outcome from the one forming the set-theoretic relation of the configuration). Moreover, configurations with consistency scores approaching neither 1 nor 0 are deemed contradictory and indicate that there are additional factors which need to be considered when trying to understand the outcomes displayed by the relevant cases (Glaesser & Cooper, 2011).

5.4.3 Stage 3: Logical Reduction

The third stage of fsQCA involves a minimization process through which configurations passing the consistency threshold of sufficiency are reduced into a more parsimonious statement about the combinations of conditions sufficient for an outcome. This is achieved through the use of Boolean algebra (automated in the fsQCA software). For example, if two configurations, ABC and AbC, were determined as consistently sufficient for an outcome, we could reduce this to just AC (since the outcome occurs whether B is present or absent).

Some analysts using fsQCA may use ‘simplifying assumptions’ to achieve greater parsimony in their logical reduction. This is achieved by making assumptions about configurations which have no empirical instances on the basis of substantive knowledge or theory (Ragin, 2008). However, because this fsQCA is largely

exploratory in nature, no simplifying assumptions were used. This is taken to be the most conservative approach to logical reduction.

The effectiveness of each of the final configurations (i.e. solution paths) identified through logical reduction is determined by a coverage score. For each solution path two types of coverage scores are calculated: a raw coverage and a unique coverage score. Raw coverage assesses “the relative importance of different combinations of causally relevant conditions” (Ragin, 2006, p. 305); that is the extent to which a solution path accounts for all cases with the outcome of interest. On the other hand, unique coverage assesses the weight of the solution path; that is the extent to which the path *uniquely* covers the outcome. A unique coverage score is necessary since solution paths may overlap. Moreover, how much of the outcome is covered by all the solution paths is expressed as the *solution coverage*. Raw coverage is calculated by finding the proportion of cases displaying the outcome which are captured by the solution path. Unique coverage is calculated by subtracting from the solution coverage, the cumulative raw coverage of the other solution paths. Coverage scores can range from 0 to 1, where scores closer to 1 indicate greater coverage (Ragin, 2006).

CHAPTER 6 RESULTS AND DISCUSSION

6.1 Introduction

FSQCA was applied to the dataset described in the previous chapter. Again, the dataset includes 5 conditions: two post MFA phase-out conditions (employment growth and employment loss), two macro-level social policy conditions (labour market protection and welfare state protection) and one development indicator. A fsQCA with five conditions has 32 (i.e. 2^5) possible combinations. Moreover, changes in two health indicators were examined, adult female and infant mortality rates. For each of these indicators two outcome sets were analyzed, one of ‘health improving’ and one of ‘health worsening’.

As previously mentioned, 27 cases are used to explore changes in female mortality rates and 29 cases are used to explore changes in infant mortality rates. Overall, 32 unique countries are included in the analysis, 14 of which are highly developed and 17 of which are not. With a human development index of 0.5, Mauritius is neither in nor out of the set of ‘highly developed countries’. This also means that Mauritius is not represented by a single configuration in the below discussed results, though it should be noted that the fuzzy-set scores of the country, across all membership sets, are configured into consistency calculations. Therefore, while not represented by a single configuration, Mauritius is still accounted for in the analysis.

The remaining sections of this chapter are organized and ordered as follows. First, the results of the analyses of necessity will be presented. Following this will be a consideration of the sufficiency tests. Here some general observations about how the results are distributed across the truth table will be discussed. The overall findings contained within the truth table will be then summarized. An assessment of the truth table before the minimization process is an important step in understanding the relationships between cases, conditions, combinations of conditions, and outcomes (Glaesser & Cooper, 2011). The solution terms of the minimization process will then be presented. Finally, the last section will look more critically at what the results of the fsQCA can tell us about the relationship between labour market and welfare state policies, changes in T&C employment after the MFA phase-out, and health outcomes.

6.2 Analyses of Necessity

Table 13 below indicates the consistency and coverage scores for the analyses of necessity. Overall, none of the causal conditions are found to be necessary causes. Recall from the previous chapter that for a condition to be *necessary* it must be present for an outcome to occur. The negation of one of the causal conditions, employment growth, meets the lowest suggested thresholds for consistency and coverage (of 0.9 and 0.5 respectively). It does so in relation to the improvement of infant mortality rates, with consistency and coverage scores of 0.904 and 0.592, respectively. However, there are two main reasons this condition was not taken to be a necessary cause.

Table 13 Tests of necessity, consistency and coverage scores

Causal Condition	Improving Adult Female Mortality		Worsening Adult Female Mortality		Improving Infant Mortality		Worsening Infant Mortality	
	Consist.	Cover.	Consist.	Cover.	Consist.	Cover.	Consist.	Cover.
Highly Developed	0.714	0.763	0.655	0.390	0.620	0.589	0.670	0.624
Not Highly Developed	0.429	0.690	0.603	0.541	0.604	0.651	0.559	0.590
Protective Labour Market Policies	0.828	0.671	0.860	0.389	0.883	0.557	0.847	0.524
Not Protective Labour Market Policies	0.245	0.759	0.271	0.468	0.246	0.621	0.284	0.703
Protective Welfare State Policies	0.501	0.685	0.576	0.439	0.427	0.520	0.511	0.610
Not Protective Welfare State Policies	0.578	0.653	0.587	0.397	0.680	0.587	0.598	0.505
Employment Growth	0.237	0.700	0.221	0.365	0.162	0.357	0.364	0.787
Not Employment Growth	0.785	0.644	0.818	0.374	0.904	0.592	0.703	0.451
Employment Loss	0.666	0.692	0.586	0.340	0.610	0.541	0.575	0.500
Not Employment Loss	0.365	0.613	0.469	0.439	0.437	0.512	0.472	0.542

To begin with, it was noted that this causal condition just barely meets the bare minimum for consistency. Often, a higher threshold than 0.9 is advocated for (Schneider & Wagemann, 2012). More importantly however, in fuzzy-set literature it

is stressed that no cause should be taken as necessary, independent of a theory that recognizes it as a relevant cause (Ragin, 2008). Indeed, a necessary cause is taken to be a rare empirical event. Therefore, the main reason the absence of T&C employment growth (which is not the same as employment loss), is not taken as a necessary cause is because it is unclear why it would be a necessary condition for the improvement of infant mortality rates in countries reliant on the textile and clothing sector.

This uncertainty relates to the make-up of countries falling under the membership set of ‘not employment growth’. There are two types of countries in this membership set. The first type includes countries which experienced no change in T&C employment after the MFA phase-out. As will be noted later in this chapter, only 5 countries are characterized as such. The second type includes countries which experienced employment loss. However, employment loss has a consistency score of 0.609, much below the 0.9 minimum threshold. Moreover, the coverage rate for employment loss is 0.541. This suggests that the coverage score of ‘not employment growth’ (0.592) is largely made of cases which experienced employment loss. The similar coverage scores of ‘not employment growth’ and ‘employment loss’ also suggests that the coverage score for the condition of ‘no change in employment’ would on its own be too low to be deemed a necessary cause. Since for these reasons neither employment loss nor ‘no change in employment’ would on its own be characterized as a necessary condition, an absence of employment growth (which is made up of these two conditions) was not taken as one either.

6.3 Analyses of Sufficiency

Results of the sufficiency analyses are organized across the summary table in table 14 below and the truth table displayed in table 15. The summary table displays information for countries which experienced either T&C employment growth or loss after the MFA phase-out. The five countries which experienced neither employment growth nor loss are not included in this table: Ecuador, Turkey, Colombia, Egypt and Greece. The configurations represented by these cases are however, are displayed across the truth table and incorporated into the Boolean minimization process.

Table 14 Tests of Sufficiency Summary Table

Protection Type	Change in Employment after the MFA phase-out in Not Highly Developed Countries					
	Employment Growth			Employment Loss		
	Countries	Adult Female Mortality	Infant Mortality	Countries	Adult Female Mortality	Infant Mortality
Protective LM and WS Policies	Brazil, Sri Lanka*	Health Improving	Health Worsening	Philippines, South Africa	Contradictory Row	Contradictory Row
Protective LM Policies Only	Bangladesh, Indonesia*	Health Worsening	Health Worsening	Azerbaijan*, Kyrgyz Republic, Morocco*, Peru	Contradictory Row	Health Improving
Protective WS Policies Only	X	NA	NA	X	NA	NA
Neither Protective LM nor WS policies	India, China, Thailand	Contradictory Row	Health Worsening	X	NA	NA
Protection Type	Change in Employment after the MFA phase-out in Highly Developed Countries					
	Employment Growth			Employment Loss		
	Countries	Adult Female Mortality	Infant Mortality	Countries	Adult Female Mortality	Infant Mortality
Protective LM and WS Policies	X	NA	NA	Bulgaria, Croatia , Latvia, Poland, Portugal, Romania** and Slovak Republic	Health Worsening	Contradictory Row
Protective LM Policies Only	X	NA	NA	Estonia**, Hungary**, Italy and Lithuania	Health Worsening	Contradictory Row
Protective WS Policies Only	X	NA	NA	Mexico	Health Worsening	Contradictory Row
Neither Protective LM nor WS policies	X	NA	NA	Korea	Health Worsening	Health Improving

LM=Labour Market
WS=Welfare State

* Only examined in reference to infant mortality rates

** Only examined in reference to adult female mortality rates

The truth table displays configurations for which there are empirical instances. Combinations of conditions which have no empirical instances are deemed ‘logical remainders’, a common trait of social science research (Ragin, 2000). While not displayed in the truth table, a consideration of logical remainders will inform the discussion of the results.

For each of the configurations which have empirical instances, the truth table also displays three important pieces of information. First, is the number of cases which have at least 0.5 membership in the respective configuration. Based on fuzzy-set logic, each case can only have at least 0.5 membership in one configuration, therefore the second column indicates which countries are described by the respective row. Finally, the health outcome columns ‘Health Improving’ and ‘Health Worsening’ indicate for each causal combination (and each health indicator), whether the conjunction passes the consistency threshold of 0.75. As mentioned in the previous chapter, rows with consistency scores approaching neither 1 nor 0 are deemed ‘contradictory configurations’ and indicate that there are additional factors which need to be considered when trying to understand the outcomes displayed by the relevant cases (Glaesser & Cooper, 2011). On the other hand, ‘contradictory cases’ are cases that display a different outcome other than the one which forms the set-theoretic relation of the configuration. Both contradictory cases and contradictory configurations will be considered in the presentation and discussion of the results of this analysis.

Table 15 FsQCA truth table results

		<u>Adult Female Mortality</u>				<u>Infant Mortality</u>			
Configuration		N =	Cases	Health improving consistency	Health worsening consistency	N =	Cases	Health improving consistency	Health worsening consistency
1	h*M*W* G*I	1	Brazil	0.975*	0.432	2	Brazil, Sri Lanka	0.486	0.993*
2	h*m*w*G*I	3	China, India, Thailand	0.426	0.702	3	China, India, Thailand	0.540	0.887*
3	h*M*w*G*I	1	Bangladesh	0.582	0.753*	2	Bangladesh, Indonesia	0.604	0.903*
4	h*M*W*g*L	2	Philippines, South Africa	0.705	0.693	2	Philippines, South Africa	0.642	0.560
5	h*M*w*g*L	2	Kyrgyz Republic, Peru	0.613	0.720	4	Azerbaijan, Kyrgyz Republic, Morocco, Peru	0.787*	0.523
6	h*M*W*g*1	2	Ecuador, Turkey	0.629	0.629	2	Ecuador, Turkey	0.881*	0.455
7	h*M*w*g*1	1	Colombia	0.681	0.676	2	Colombia, Egypt	0.933*	0.603
8	H*M*W*g*L	7	Bulgaria, Croatia, Latvia, Poland, Portugal, Romania, Slovak Republic	0.398	0.821*	6	Bulgaria, Croatia, Latvia, Poland, Portugal, Slovak Republic	0.469	0.660
9	H*m*W*g*L	1	Mexico	0.555	0.867*	1	Mexico	0.673	0.667
10	H*M*W*g*L	4	Estonia, Hungary, Italy, Lithuania	0.416	0.816*	2	Italy, Lithuania	0.685	0.606
11	H*m*w*g*L	1	Korea	0.578	0.894*	1	Korea	0.887*	0.492
12	H*M*w*g*1	1	Greece	0.745	0.532	1	Greece	0.954*	0.526

H = Highly Developed; M = Protective Labour Market Policies; W = Protective Welfare State Policies; G= Employment Growth; L=Employment Loss (lower case signifies the negation of these conditions)

*Consistency greater than 0.75

6.3.1 General Inspection of the Truth Table

Included countries can be organized into 12 out of the 32 logically possible combinations (rows in the truth table). This implies that there are 20 logical remainders.

Of the configurations which have empirical instances, general inspection of the truth table points to at least three interesting findings. These relate to: 1) the distribution of employment loss and gain across countries with different levels of development; 2) the distribution of protective labour market and welfare state policies across countries of different levels of development; and 3) the distribution of employment loss and gain across countries with different levels of social protection.

Employment change across countries with different levels of development

Of the 32 countries included in this study, only seven experienced employment growth after the MFA phase-out, none of which were highly developed: Brazil, China, India, Thailand, Bangladesh, Indonesia and Sri Lanka. However, an almost equal number of less developed countries analysed in this study experienced employment loss: Azerbaijan, Kyrgyz Republic, Morocco, Peru, Philippines, and South Africa. Moreover, Colombia, Ecuador, Egypt, and Turkey are all less developed countries which saw no significant change in their T&C employment. Therefore, while the phase-out may have favoured less developed countries in terms of employment growth, this favouring was not shared equally among all less developed countries.

All highly developed countries included in this analysis experienced employment loss with the exception of Greece which saw no change in its T&C related employment after the MFA phase-out.

Labour market and welfare state policies across countries with different levels of development

The distribution of protective labour market and welfare state policies across the configurations is uneven. Of all the 17 not highly developed countries, six (Brazil, Sri Lanka, the Philippines, South Africa, Ecuador and Turkey) are characterized as having both protective labour market and welfare state policies. Eight are characterized as having only protective labour market policies (and not protective welfare state policies): Azerbaijan, Bangladesh, Indonesia, Kyrgyz Republic, Morocco, Peru, Colombia, and Egypt. Finally, China, India and Thailand are characterized as having neither protective labour market nor welfare state policies.

Of the 14 countries which are highly developed, the majority are characterized by both protective labour market and welfare state policies. This includes Bulgaria, Croatia, Latvia, Poland, Portugal, Romania and the Slovak Republic. Five highly developed countries are characterized by their protective labour market policies (but lack of protective welfare state policies): Estonia, Hungary, Italy, Lithuania and Greece. Mexico is the only country which is characterized by protective welfare state policies and an absence of protective labour market policies; and Korea is the only highly developed country characterized neither by protective labour market nor welfare state policies.

The difference between highly and less highly developed countries in terms of labour market and welfare state protection is perhaps unsurprising. However, the differences *among* highly and less developed countries is noteworthy.

Employment change across countries with different levels of social protection

Of the cases analysed, it doesn't appear that employment growth or loss favoured countries with less or more protective labour market and welfare state policies. Among less developed countries, those with neither labour market nor welfare state protection policies saw employment growth (China, India, and Thailand); however, Brazil and Sri Lanka, with the most comprehensive level of protection, similarly saw its employment in the T&C sector grow after the MFA phase out. On the other hand, the Philippines and South Africa, which are also both characterized by protective labour market and welfare state policies, saw employment loss. Among high income countries, all levels of protection (or absence thereof) were associated with employment loss.

6.3.2 Overall Truth Table Results

T&C Employment Growth and Health Outcomes

The seven countries which experienced employment growth after the MFA phase-out are organized across three configurations: (h*M*W*G*I), (h*m*w*g*I) and (h*M*w*G*I). These configurations are associated with both improvements and deteriorations in adult female mortality rates. Only the combination of conditions represented by Brazil (h*M*W*G*I) is associated with improved female mortality rates. Interestingly however, this configuration is also sufficient for the health outcome set of health worsening in terms of infant mortality rates. This configuration is represented by both Brazil and Sri Lanka in this latter case. In fact, employment growth is associated with worsening infant mortality rates across all of the configurations characterized by employment growth.

The configuration represented by China, India and Thailand is characterized by neither protective labour market nor welfare state policies and in relation to female mortality rates it is contradictory in nature. This suggests that there are additional factors which need to be considered when trying to understand the outcomes displayed by these cases (Glaesser & Cooper, 2011).

Finally, despite employment growth in the context of protective labour market policies, the configuration represented by Bangladesh is (just barely) sufficient for the outcome set of health worsening with a consistency score of 0.753.

T&C Employment Loss and Health Outcomes

Both highly and less developed countries experienced employment loss after the MFA phase-out. In highly developed countries, employment loss is associated with worsening adult female mortality rates across all configurations of which there are empirical instances. In less developed countries, the results for adult female mortality outcomes are contradictory for the two configurations of which there are empirical instances.

For both highly and less developed countries, the results for infant mortality are largely contradictory. Only two of the six configurations characterized by employment loss demonstrate a set theoretic relation to the improvement of infant mortality rates ($H*m*w*g*L$ and $h*M*w*g*L$).

6.4 Logical Reduction

The configurations which show a set theoretic relation to a health outcome were reduced using the previously discussed approach of logical reduction. The final reduced configurations are displayed in Table 16 below.

Table 16 FsQCA Logical Reduction Results

Reduced Solution Paths						
<u>Adult Female Mortality Rates</u>						
	Cases	Outcome Consistency	Raw Coverage	Unique Coverage	Solution Coverage	Solution Consistency
Health Improving $h^*M^*W^* G^*l$	Brazil	0.975	0.082	0.082	0.082	0.975
Health Worsening $h^*M^*w^* G^*l$	Bangladesh	0.753	0.079	0.075	0.697	0.830
H^*g^*L	Italy, Korea, Hungary, Estonia, Lithuania, Slovak Republic, Croatia, Latvia, Poland, Bulgaria	0.841	0.621	0.618	0.697	0.830
<u>Infant Mortality Rates</u>						
	Cases	Outcome Consistency	Raw Coverage	Unique Coverage	Solution Coverage	Solution Consistency
Health Improving $M^*w^*g^*l$	Colombia, Egypt, Greece	0.897	0.267	0.052	0.536	0.826
$h^*M^*g^*l$	Ecuador, Turkey Colombia, Egypt	0.904	0.251	0.040	0.536	0.826
$h^*M^*w^* g$	Kyrgyz Republic, Colombia, Azerbaijan, Morocco, Egypt	0.824	0.400	0.168	0.536	0.826
$H^*m^*w^*g^*L$	Korea	0.887	0.107	0.039	0.536	0.826
Health Worsening $h^*w^*G^*l$	Bangladesh, India, Indonesia, China, Thailand	0.842	0.270	0.089	0.303	0.856
$h^*M^*G^*l$	Indonesia, Sri Lanka, Bangladesh, Brazil	0.916	0.214	0.033	0.303	0.856

H = Highly Developed; M = Protective Labour Market Policies; W = Protective Welfare State Policies; G= Employment Growth; L=Employment Loss

6.4.1 Solution Paths for Adult Female Mortality

In terms of adult female mortality rates, the Boolean minimization process resulted in only one solution path to health improvement: $h^*M^*W^*G^*l$. This solution's raw coverage however, at 0.082, is very low indicating that there are many cases following other pathways to health improvement

The minimization process here was straightforward, since there is only one row with a consistency above 0.75. Although the configuration represented by

Greece is very close to meeting this threshold at 0.745, because this represents a clear drop in consistency from the configuration represented by Brazil (0.975) it was decided against including it in the minimization process. If it had been included it would have resulted in the following configuration: $H^*M^*w^*g^*l$. Had this configuration been included the coverage score of the solution path would have increased to 0.256, still relatively low; however the consistency score would have decreased to 0.778.

In terms of worsening adult female mortality rates, the Boolean minimization process resulted in two solution paths: H^*g^*L and $h^*M^*w^*G^*l$. Together the two configurations have relatively high solution coverage of 0.697 and a solution consistency of 0.823.

6.4.2 Solution Paths for Infant Mortality Rates

In terms of infant mortality rates, the Boolean minimization process resulted in four solution paths to health improvement: $(M^*w^*g^*l)$; $(h^*M^*g^*l)$; $(h^*M^*w^*g)$; and $(H^*m^*w^*g^*L)$. The first two of these configurations are of less interest to the objectives of this work since they are characterized neither by employment growth nor loss. However, their respective raw coverage (0.267 and 0.251) and consistency scores (0.897, 0.904) illustrate their contribution to the solution's overall coverage and consistency scores of 0.537 and 0.826.

In terms of worsening infant mortality rates, the Boolean minimization process resulted in two solution paths: $(h^*w^*G^*l)$ and $(h^*M^*G^*l)$. Together, these solution paths have an overall low coverage of 0.303.

6.5 Discussion

In total, seven solution paths demonstrate a sufficient relationship between employment changes after the MFA phase-out and changes in health outcomes. In terms of adult female mortality, the results seem to suggest that across countries which are not highly developed, protective labour market policies in conjunction with protective welfare state policies are health promoting in the context of T&C employment growth, as indicated in the first solution path of which Brazil is a

member. This finding is aligned with the EMOCNET framework which highlights the health importance of protective labour market and welfare state policies (Benach et al., 2007) however, more work is needed to understand the specific causal processes and mechanisms behind this relationship.

The results also demonstrate that for less developed countries, employment growth in the context of labour market protection (but not welfare state protection) is associated with the worsening of adult female mortality rates, as indicated by the case represented by Bangladesh. This result may signify that in the absence of protective welfare state policies, T&C employment growth is largely detrimental to female mortality in a way in which protective labour market policies alone are unable to compensate for. It could be for instance, that even despite protective labour market policies, which promote healthy employment conditions, material deprivation, income insecurity and/or economic inequalities outweigh these benefits. Alternative explanations for this finding would be that labour market protections themselves are damaging to adult female mortality, or that the indicator used to operationalize labour market protections is flawed. Theoretically, it is hard to imagine how protective labour markets might be health damaging. Conceivably, more protective labour market policies which for instance, provide workers with greater collective bargaining power could perhaps result in unhealthy clashes between workers and employers; however, this is not an explanation which is supported in the literature. That Bangladesh is characterized in this study as having protective labour market policies, though is often in the media for its dangerous T&C working conditions (Harris, 2013; Khaleeli, 2013), may signify that the approach used to operationalize labour market protection is flawed. However, ratification of fundamental ILO conventions has been described as a reliable way of measuring labour market protection in less developed countries (Rudra, 2007), especially given the otherwise dearth of data on labour protections. As with the previous solution, this finding highlights the need for more research on the causal processes behind this set-theoretic relationship.

Overall, these first two solutions seem to highlight the health importance of protective welfare states in the context of T&C employment growth, but they do not tell us to what degree protective welfare states are health promoting. It is unclear for instance, whether protective welfare state policies alone (in the absence of protective

labour market policies) would be health promoting, especially since this type of configuration is a logical remainder (i.e. there are no empirical cases of this configuration).

The remaining solution paths in regards to female mortality indicate that in highly developed countries, employment loss is universally associated with worsening health regardless of the presence or absence of labour market and welfare state protections. This finding is puzzling since we might expect protective policies to act as a buffer to the potentially negative impacts of employment loss. However, the types of alternative employment opportunities available to workers are one factor that may be shaping these results. This highlights the causal complexity underlying the fsQCA results and again illustrates the need for greater work on causal processes and mechanisms.

In terms of infant mortality, employment growth appears to be largely health worsening. Indeed every configuration characterized by employment growth is sufficient for the worsening of infant mortality rates. This includes the configuration, represented by Brazil and Sri Lanka, which is characterized by both protective labour market and welfare state policies and associated with improving *female* mortality rates. That infant mortality rates worsen in the context of employment growth, even when adult female mortality rates improve, is at first glance puzzling. We might think for instance, that mothers with access to income security and decent working conditions are better able to provide health promoting resources for an infant. However, there are a variety of reasons that might explain the worsening of infant health in this context, such as the availability of the mother to care for the infant if they continue to work after giving birth. That Thailand and Indonesia are contradictory cases, in that they both saw infant mortality rates improve despite employment growth, means that comparative case studies may provide greater insight into these issues.

The impacts of employment loss on infant mortality are less clear. Three of the four configurations characterized by highly developed countries and employment loss present contradictory results. Only the configuration represented by Korea is characterized by a set-theoretic relationship whereby employment loss, in the context of neither protective labour market nor welfare state policies, is sufficient for the improvement of infant mortality rates.

In regards to countries which are not highly developed, two configurations are characterized by employment loss: $h^*M^*W^*g^*L$ and $h^*M^*w^*g^*L$. The first of these is contradictory in nature. The second is set-theoretic in nature with improving infant mortality rates.

Interestingly, all of the configurations characterized by employment growth and a set-theoretic relation to infant mortality indicate a health worsening relationship and all of the configurations characterized by employment loss and a set-theoretic relation to infant mortality indicate a health improving relationship. However, that there are so many contradictory rows in terms of infant mortality rates and employment loss suggests that the chosen causal conditions are not by themselves adequate in explaining this health outcome. This should not be taken to mean that labour market and welfare state policies are not important determinants of infant mortality in the context of employment loss, but that infant mortality may be best explained when these policies are considered in conjunction with other causally important conditions.

It is also important to consider how far the solution paths go towards explaining the health outcomes of all the included cases. The solution paths found in relation to the worsening of adult female mortality rates cover the majority of countries experiencing this outcome with a solution coverage score 0.697. However, only one solution path was found to be set-theoretic in nature with the improvement of adult female mortality rates. The raw coverage for this path is extremely low at 0.082, and indicates that there are many cases following other pathways to the outcome. More work is needed to explain these cases. Such work will also aid in resolving many of the contradictory cases and rows found in relation to adult female mortality outcomes.

In regards to infant mortality rates, the solution coverage scores are also less than ideal at 0.537 and 0.303 for the health improving and health worsening outcome sets respectively. More work understanding the causal conditions behind infant mortality outcomes after the MFA phase-out would also go a long way in resolving many of the corresponding contradictory results.

6.6 Summary

The solutions achieved with this fsQCA analysis demonstrate clear cross-case regularities and are a first step in elucidating the impacts of the MFA phase-out on health. They suggest that changes in employment in the T&C sector are sometimes associated with health outcomes in unique ways depending on countries' level of labour market and welfare state protection. Interestingly, increased employment seems to be detrimental to infant health, even while beneficial to adult health.

Overall however, the results of the truth table and the solutions of the minimization process are limited in what they can tell us about the importance of protective labour market and welfare state policies in the context of T&C employment changes after the MFA phase-out. Low coverage scores across the solution paths means that many of the countries' health outcomes remain unexplained. Moreover, the results achieved in this analysis are compatible with different causal processes and thus present competing explanations for the different health outcomes investigated.

The findings however, are a useful basis from which to explore these issues in greater depth. One of the benefits of fsQCA is that it provides a systematic approach for choosing cases for in-depth case-study work (Schneider & Rohlfing, 2013). On the basis of these fsQCA results, such work can potentially provide a causal account of the resulting cross-case patterns by identifying specific explanations or narrowing the range of feasible theoretical accounts.

INTRODUCTION TO PART 3

The next three chapters comprise the final half of the second research component of this thesis: the case study of the 2005 phase-out of the Multi-Fibre Arrangement (MFA). In the first part of this thesis, a literature review was undertaken to better understand how researchers theorize the pathways and mechanisms mediating the trade liberalization and health relationship? (RQ1) An answer was sought for this question as a first step towards meeting the first research objective of this thesis: **to identify how trade liberalization and social policy interact to influence health and its social determinants.** Among other considerations related to the trade liberalization and health relationship, this review found that liberalizing policies have been particularly underexplored in the context of labour markets. Social policies, however, were very much emphasized as a mediating pathway to health in this context.

In the second part of this thesis, the MFA phase-out was introduced as a useful case for further exploring this research objective. Furthermore, towards this end, a second research objective was introduced: **to investigate and analyse how the phase-out of the Multi-Fibre Arrangement impacted health in countries reliant on the textile and clothing sector for employment.** Two research questions were posed towards meeting this objective. The first asks: How did health outcomes change after the phase-out of the Multi-Fibre Arrangement in countries reliant on the textile and clothing sector? (RQ2) A fuzzy-set qualitative comparative analysis (fsQCA) was undertaken to answer this question. This analysis finds that T&C employment changes after the MFA phase-out are sometimes associated with changing adult female and infant mortality rates, depending on countries' level of labour market and welfare state protections.

A main limitation of the fsQCA however, is that it identifies associations and not causality. For this reason, a second research question was posed. It asks: What are the potential causal mechanisms responsible for these changes? (RQ3) This is the question that the following three chapters will deal with. Specifically, Chapter 7 will briefly introduce process tracing as a methodology which can help provide an account of the cross-case patterns achieved in the fsQCA. It will also present a systematic procedure for selecting cases for undertaking process tracing efforts after a fsQCA. The process tracing results will be presented in Chapter 8 and then

critically discussed in Chapter 9. Chapter 10 will then conclude by drawing together the three parts of this thesis.

CHAPTER 7 METHODS: AN EMPIRICAL WITHIN-CASE ANALYSIS

7.1 Introduction

In Chapter 6 it is found that changes in countries' textile and clothing (T&C) employment are sometimes associated with changing adult female and infant mortality rates after the phase-out of the Multi-Fibre Arrangement (MFA), depending on countries' level of labour market and welfare state protections. These results however, do not tell us much about the actual causal processes and mechanisms which tie certain combinations of causal conditions to particular outcomes. Moreover, the results of the fsQCA analysis raised questions about the appropriateness of the indicator used to measure countries' labour market protections and also presented some puzzling results, such as the finding that adult female mortality rates worsened in all highly developed countries experiencing T&C employment loss after the MFA phase-out, regardless of the absence or presence of protective labour market and welfare state policies. This chapter will briefly introduce process tracing as a methodology which can help provide an account of these cross-case patterns and concerns.

The chapter will begin with an overview of process tracing and its relevance to work which seeks to investigate the relationship between trade liberalization and health as well as cross-case analyses like fsQCA. Here the specific value of theory-building process tracing will be emphasized. The chapter will then move to formally define process tracing and its major component, causal mechanisms. Finally, a systematic approach will be identified for carrying out process tracing which is aligned with the objectives of this work. In reference to this approach, twelve countries are identified for further in-depth case study work.

7.2 Process Tracing Overview

Process tracing has three broad purposes: to test whether a theorized causal mechanism exists in reality (theory-testing), to build a causal mechanism where theory is less developed (theory-building) and to explain a particular outcome in a specific case (explaining outcome) (Beach & Pedersen, 2012). The ambition of testing whether an already theorized causal mechanism exists in reality is to move us away from mere correlations and associations achieved in cross-case research like fsQCA. Furthermore, when there is less developed theory about an association

between a cause and an outcome, we can use process tracing to help build one. Finally, when a case has a particularly puzzling outcome, process tracing can be used to craft an explanation. Whereas these first two purposes of process tracing are considered theory-centric, the third is considered to be largely case-centric. This is because, in this latter scenario, the analysis is focused on explaining an outcome in a way in which is tied to a specific case and not to a more generalized theory.

This work will draw on theory-centric process tracing since it seeks to explain the results of the fsQCA which are not case specific, but rather based at the cross-case level. In doing so, it will continue to draw on the EMCONET framework, which was presented in Chapter 5 as a valuable tool for thinking about the complex ways T&C employment changes after the MFA phase-out might have impacted health. However, because this framework still leaves open the possibility for many different kinds of causal processes shaping the fsQCA results, this work will utilize a theory-building process tracing approach rather than a theory-testing one. Again, theory-building process tracing is useful when we know there is an association between a cause and an outcome but existing theory offers little in terms of causal explanation. Thus the purpose of theory-building process tracing is to identify a plausible causal mechanism that can be tested empirically in subsequent research (Beach & Pedersen, 2012).

Process tracing has been identified as one of the best ways to both describe and evaluate the policy-relevant relationships between global processes and SDOH (Labonté & Schrecker, 2005). While it has been cautioned that rarely is it possible to evaluate the health impact of global processes with the same degree of conclusiveness that is possible in standard epidemiological study designs (Labonté & Schrecker, 2007), it is important to note that process tracing relies on a fundamentally different kind of inference than these studies (Beach & Pedersen, 2012). In most epidemiological studies, researchers typically use a ‘frequentist logic of inference’. They do this by investigating the size of effect that a given causal condition (or treatment) has on an outcome versus a control group. What enables researchers to make an inferential claim about a causal relationship are classical statistical laws of probability.

In contrast to these kinds of studies, process tracing relies on the collection of evidence with the aim of assessing whether a causal process has occurred. In

evaluating this evidence, an assessment is made whether our confidence has changed concerning the presence/absence of a causal mechanism. Thus the type of inference made in process tracing studies is Bayesian in nature. This type of research should not be seen as a weaker research design. Indeed, because process tracing efforts are focused on making inferences at the within-case level, Bayesian logic allows for stronger inferences than would be possible using frequentist logic (which is based at the cross-case level) (Beach & Pedersen, 2012). Moreover, it is worth reiterating that the purpose of theory-building process tracing is to identify a plausible causal mechanism that can be tested empirically in subsequent research.

7.3 Defining Process Tracing and Causal Mechanisms

Because process tracing is a tool used across different research areas, there are a variety of definitions of what exactly constitutes an instance of process tracing. This work adopts a definition of process tracing from Bennett and Checkel (Forthcoming) which discusses contemporary developments on the philosophical and practical dimensions of process tracing. In this work, process tracing is defined as:

“the analysis of evidence on processes, sequences, and conjunctures of events within a case for the purposes of either developing or testing hypotheses about causal mechanisms that might causally explain the case. Put another way, process tracing examines the deductive observable implications of hypothesized causal mechanisms within a case to test whether these might in fact explain the case. Or, it inductively uses evidence from within a case to develop hypotheses that might explain the case; the latter hypotheses may, in turn, generate additional testable implications in the case or in other cases” (p. 7).

This definition of process tracing is adopted since its foundations are found in the philosophy of social science which emphasizes the role of causal processes and mechanisms in producing outcomes. This is in contrast for example, to neo-Humean perspectives which ground causation in terms of associations or correlations (Beach & Pedersen, 2012). Moreover, often definitions of process tracing reference the idea of an ‘intervening variable’ in seeking to explain a process taking place between an independent variable (or variables) and an outcome (dependent variable). However, framing causal processes via reference to intervening variables runs the risk of

oversimplification by “suggest[ing] that an intervening variable is both fully caused by the independent variable(s) that preceded it, and that it transmits this causal force, without adding to it, subtracting from it, or altering it” (Bennett & Checkel, forthcoming p. 6). The above definition, in contrast, allows for the possibility that the processes taking place between a cause and an outcome may be influenced by forces other than the independent variable under investigation, and that “they may have amplifying or dampening effects of their own, or interactions or feedback effects” (Bennett & Checkel, forthcoming p. 6).

The above definition is however, dependent on the notion of *causal mechanisms* which also needs clarification. A definition of causal mechanisms is adopted by the same authors, who offer that causal mechanisms are:

“ultimately unobservable physical, social, or psychological processes through which agents with causal capacities operate, but only in specific contexts or conditions, to transfer energy, information, or matter to other entities” (Bennett & Checkel, forthcoming p. 15).

The value in this definition is two-fold. To begin with, it recognizes that causal mechanisms are ultimately unobservable, making clear that causality cannot be observed, only inferred. While some definitions frame causal mechanisms as observable events, to suggest otherwise is especially important in reference to this work. This is because the outcomes under investigation relate to changes in health which are ultimately unobservable if we consider the bio-medical pathways producing these events. Second, this definition leaves open the possibility that evidence may be found at all levels of an analysis, for instance and specifically in relation to this work, evidence may proceed from the micro level of epidemiological data to the macro level of changes in broader determinants of health and vice versa.

7.4 Steps in Theory-Building Process Tracing

Despite the fact that process tracing has become a widely used approach, little work has engaged with explicitly addressing the methodological techniques and standards of theory-building process tracing. An exception to this is the work of Beach and Pedersen (2012) which this thesis draws on to formulate a methodical approach to understanding the cross-case patterns exhibited in the results of the fsQCA analysis. As will be discussed in greater detail below, work by Schneider and

Rohlfing (2013) will also be drawn upon in creating this approach, as these authors offer an especially valuable technique for the selection of cases after a fsQCA.

Beach and Pedersen (2012) emphasize three main steps in a theory-building process tracing exercise: (1) case selection, (2) the collection of empirical material, and (3) the building of theoretical mechanisms. The remaining sections of this chapter will examine each of these steps in greater detail.

7.4.1 Case Selection

There are two kinds of cases useful for theory-building process tracing: typical cases and deviant cases. Typical cases are useful for identifying plausible causal mechanisms between a causal condition (or combination of conditions) and an outcome. Deviant cases by contrast, are useful for learning about the context in which a mechanism does not work (Beach & Pedersen, 2012).

Work by Schneider and Rohlfing (2013) develops the case selection logic for theory-building process tracing when it is undertaken after a fsQCA analysis of sufficiency. One way they do so is by clarifying that there are different types of deviant cases, each with its own analytic purpose. Another way they do so is by clarifying which typical and deviant cases are the most useful to process trace.

For each solution path of a fsQCA, the authors note that cases can be plotted on a XY plot. This plot illustrates cases' membership in the solution path, alongside their membership in the outcome. As can be seen in figure 27, there are six types of cases which are discernible in a fuzzy-set analysis of sufficiency. Notice while there is only one type of typical case (in area 1 of the plot), there are three types of deviant cases (in areas 2, 3, and 6 of the plot). There are also two types of irrelevant cases (in areas 4 and 5 of the plot).

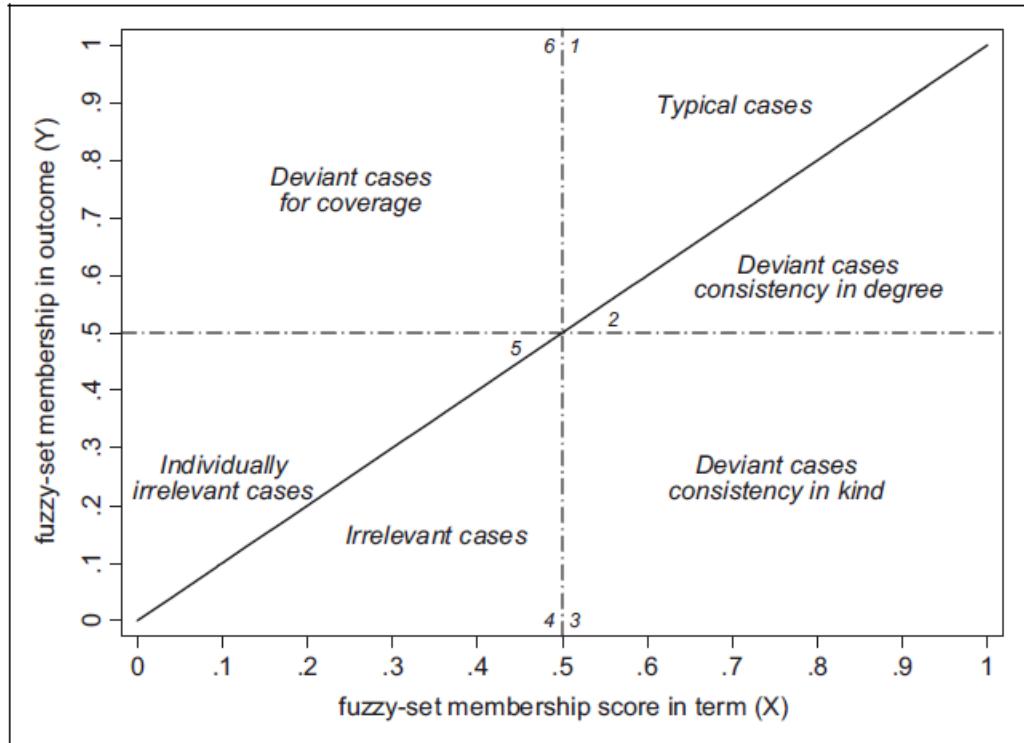


Figure 27 Case-Selection after a fsQCA from Schneider and Rohlfing (2013)

Typical cases are cases which display high membership in both the solution path and the outcome. Like typical cases, cases in area 5 of the plot are also consistent with a statement of sufficiency since their membership in the solution path is lower than their membership in the outcome. However, because they are neither members of the solution path nor members of the outcome, the inferential benefits of studying these cases are limited. Cases in area 4 of the plot are also consistent with a statement of sufficiency, however Schneider and Rohlfing (2013) coin these cases as ‘deviant to coverage’ since qualitatively they are members of the outcome but not the solution path. Studying this type of deviant case can provide insight on why coverage rates for solution paths may be low, but are of less use when trying to understand the causal mechanism behind a solution path. This is because cases in this area do not provide evidence against the statement of sufficiency since we do not expect the outcome to occur when cases are not members of the solution path.

There are three types of cases which are inconsistent with a statement of sufficiency. Cases in area 6 are deemed irrelevant since they are neither members of the solution path nor outcome. Therefore there is little to be gained from process tracing these cases when trying to understand the causal mechanism behind a sufficient solution path. In this scenario, there is also little to be gained from

examining cases in area 2 of the plot. These cases are deemed ‘deviant cases in degree’. Like typical cases, they are members of both the solution term and the outcome, however they are inconsistent with a pattern of sufficiency since their membership in the outcome is lower than their membership in the solution path. Thus, in seeking to understand a causal mechanism behind a statement of sufficiency we are better off studying a typical case. Finally, cases in area 3 of the plot are puzzling since they are members of the solution path but not the outcome. These cases provide evidence against the statement of sufficiency, and thus represent a potentially useful case to process trace when trying to understand the causal mechanism behind a sufficient relationship. Schneider and Rohlfing (2013) indicate that the most likely reason for cases ‘deviant in kind’ is the omission of a causal condition of which the deviant case is not a member but the typical cases are. Once this omitted condition is included in the analysis, the deviant case will no longer be a member of the solution path and thus turned into an irrelevant case in area 5 of the plot. Since this omitted condition will have a role in the causal mechanism, studying these deviant cases can be useful when trying to understand causal processes behind a solution path.

Because this work is focused on better understanding the causal mechanisms behind the sufficient configurations identified in the fsQCA, the focus here is on typical and deviant cases in kind (in areas 1 and 3 of the above XY plot respectively).

Based on this XY plot, Schneider and Rohlfing (2013) outline multiple principles that should be followed when selecting cases for process tracing after a fsQCA analysis. Which principles apply depend on what basis a case is being selected for, as described below.

Typical Cases

In aiming to understand causal mechanisms behind fsQCA solutions, the authors highlight the importance of the *principle of diverse case selection*. This principle states that at least one typical case for each of the solution paths should be chosen for analysis. This idea is defended on two accounts: first, to have a comprehensive understanding of the examined outcomes, one should examine at least as many typical cases as there are solution paths. Second and relatedly, a typical case from each of the solution paths should be examined since the insights from

process tracing in one solution path, will not be generalizable to another solution path.

In the solutions with more than one typical case, the *ideal typical case* will be the one which is closest to displaying a membership of 1 both in the outcome and in the solution pathway.

It is emphasized that in testing for a theorized causal mechanism researchers should strive to utilize a comparative case method in which multiple typical cases are compared to each other. This is simply because “insights gathered in one typical case can be strengthened by [comparing it with] another typical case” (Schneider & Rohlfing, 2013, p. 569). Per Schneider and Rohlfing (2013), cases should be chosen for a typical case comparative design via reference to the *principle of max-max difference* which states that cases should be compared which span the maximum range of membership in the solution term and outcome. Here the idea is that we can increase our confidence in a causal mechanism by showing that it is in place across countries which span the range of membership in the condition and outcome.

Deviant cases

Again, cases which are deviant in kind are puzzling in that they are members of the solution term but do not display the outcome of the subset relationship. As described above, this is likely to relate to the omission of a causal condition. For this reason, cases which are deviant to consistency are best investigated via comparative process tracing alongside a typical case. This is because it would be hard to discern what is anomalous about a case, without knowing what causal mechanism is at play in a typical case (Shneider & Rohlfing 2013).

The ideal-typical deviant case should be chosen via reference to the *principle of maxi-min difference*. This principle states that when comparing a deviant case with a typical case, the difference in the cases’ memberships in the outcome should be maximized, while the difference in the cases’ memberships in the solution path should be minimized. Minimizing the cases’ membership in the solution path ensures similarity between the cases in relation to the causal conditions being investigated. The idea behind maximizing the difference in outcomes is that this will increase the likelihood of finding something anomalous about the deviant case.

Final selection of cases:

The above demonstrates important considerations to be taken into account when selecting case studies after a fsQCA. Ideally, all typical and deviant cases would be studied in-depth, but this would require a prohibitively large number of studies.

With careful consideration, 12 countries were identified for greater in-depth analysis. These countries were chosen with two main considerations in the mind. (1) First, it was decided to prioritize typical cases since it is these cases that move us most towards understanding the sufficient relationships achieved with the fsQCA analysis. (2) The distribution of cases across the different solution paths was also used to arrive at the final selection of cases. This consideration takes advantage of the fact that cases are characterized in different ways across different solution paths. For instance, Korea is a typical case in both the second and sixth solution path. Bangladesh is a typical case in both the third and seventh solution path. In short, the idea here is that by utilizing countries' multiple characterizations, the final selection of cases is able to address a wider range of theory-building process tracing considerations, while at the same time restricting the number of included countries.

In the fsQCA analysis presented in the previous chapter, a total of seven solution paths are identified. That there are seven solutions means that adhering to the *principle of diverse case selection* would require a minimum of 7 single case studies. Of the seven solution paths, four have only one typical case: solution 1 (Brazil); solution 3 (Bangladesh); solution 5 (Korea); and solution 6 (China). In the 2nd and 7th solution paths Italy and Sri Lanka were clearly the best contender for an ideal typical case based on the solutions XY plot. (Solution paths' XY plots are presented and further discussed in Chapter 8). In the case of the 4th solution path, the best contender was less clear from eyeballing the XY plot, both Azerbaijan and the Kyrgyz Republic seem to be ideal contenders. However, because the Kyrgyz Republic had a higher membership in the solution term, it was chosen over Azerbaijan to be included in the final set of countries. Therefore the first seven cases chosen as typical cases were: Brazil, Italy, Bangladesh, the Kyrgyz Republic, Korea, China and Sri Lanka.

Using the principle of max-max difference the Slovak Republic was chosen for a typical case comparison in solution 2. This case was also selected with a

consideration of the principle of maxi-min in relation to selecting Portugal as a case deviant in kind for this solution path (as described below). Moreover, Korea besides being the only typical case of solution 5, is also a typical case in solution 2, rendering another possible comparative case in this solution path. Bangladesh, in addition to being the only typical case of solution 3 is also a typical case in the 7th solution path. Therefore, Bangladesh was used for a typical case comparative approach in solution path 7 alongside Sri Lanka, the ideal typical case.

In regards to deviant cases, only four solution paths have cases which are deviant in kind: solution paths 2, 4, 6 and 7. In solution paths 4 and 7, the only deviant cases are Peru and Indonesia, respectively. Considering the principle of maxi-min difference, in solution 2 Portugal is the most ideal case to explore deviancy in comparison with the solution's ideal-typical case, Italy. In solution 6, Thailand is the most ideal case to explore deviancy in relation to the solution's idea-typical case, China. Therefore, the cases best suited for exploring deviancy concerns are Peru, Indonesia, Portugal, and Thailand.

Combining the eight typical cases identified for in-depth study (Brazil, Italy, the Slovak Republic, Bangladesh, the Kyrgyz Republic, Korea, China and Sri Lanka) with the following four deviant countries: Thailand, Portugal, Indonesia, and Peru; this work is able to cover 1) a typical case for each solution path 2) comparative typical case studies for two solutions (paths 2 and 7) and 3) deviant cases in kind for the four solutions paths that have such cases (paths 2, 4, 6 and 7).

7.4.2 Collection of Empirical Material and Building Causal Mechanisms

In the second step of theory-building process tracing, data is collected to build an empirical narrative of the case. In the third step, existing theory is used to create a potential causal mechanism.

Because selection bias is particularly acute in process tracing research (Beach and Pedersen, 2012), the gathering of evidence is approached with this vulnerability in mind. Moreover, this work attempts to minimize this bias in part by using a systematic process to search for evidence. To locate sources of evidence Google, Google Scholar and cablegatesearch.net were used. This latter source is a search engine for diplomatic cables released by Wikileaks in 2010. A preliminary search strategy for information on the MFA phase-out returned multiple results directed at

this source, and for this reason it was included in the broader search strategy. A preliminary search strategy also concluded that traditional database searches returned a dearth of relevant material and thus this search strategy was not undertaken.

In building a narrative about the T&C sector and consequences of the MFA phase-out in countries, topic keywords common to all Google searches included the country name, the Multi-Fibre Arrangement, health, employment, the textile and clothing sector, apparel, garments, and ready-made garments. Once a scaffold of this narrative was constructed, material regarding countries' labour market and social policies was searched for. Here, aside from Google and Google Scholar, international organizations with a focus on these macro-level conditions were searched such as the International Labour Organization, the World Bank and the Asian Development Bank.

As the narrative was constructed, the aim was to inductively work backwards in search of a plausible causal mechanism that might help explain each solution path's results. In terms of deviant cases, process tracing was specifically used to investigate what about the country is anomalous in relation to the typical cases. Again, evidence was interpreted as causally relevant with the EMCONET framework (Benach et al., 2007) in mind. The collection of empirical evidence ceased when the search strategy began to reveal redundant observations and/or when the form of a causal mechanism began to take at least preliminary form.

CHAPTER 8 CASE STUDIES AND THE SEARCH FOR CAUSAL MECHANISMS

8.1 Introduction

This chapter presents the process tracing results for the twelve countries selected for in-depth case work. Evidence was collected for each country as specified in the previous chapter. This chapter will proceed by presenting evidence in sequential order of the fsQCA results. Recall from Chapter 6, that the fsQCA identified seven solution paths as sufficient for changing mortality rates. The first three of these solution paths relate to changes in adult female mortality, the final four relate to changes in infant mortality rates.

For each solution path, this chapter will present four pieces of information: 1) A brief overview will outline the sufficient relationship characterizing the solution path (i.e. the causal conditions and the associated health outcome). This overview will also present the relevant XY plot used for case selection and specify which country/ies will be investigated. 2) Next, the potential causal mechanism will be summarized along with a description of the sources of evidence. 3) The evidence found in the process tracing exercise will then be presented in greater depth and finally, 4) a summary which restates the causal mechanism and discusses it in relation to broader methodological considerations will be presented. The following chapter will critically discuss these case study results.

8.2 Solution Path 1: Brazil

8.2.1 Introduction

As can be seen in the below XY plot, Brazil is the only country characterized by the first solution path. Recall that this solution path relates increases in T&C employment, in conjunction with protective labour market and welfare state policies, to an improvement in female mortality rates.

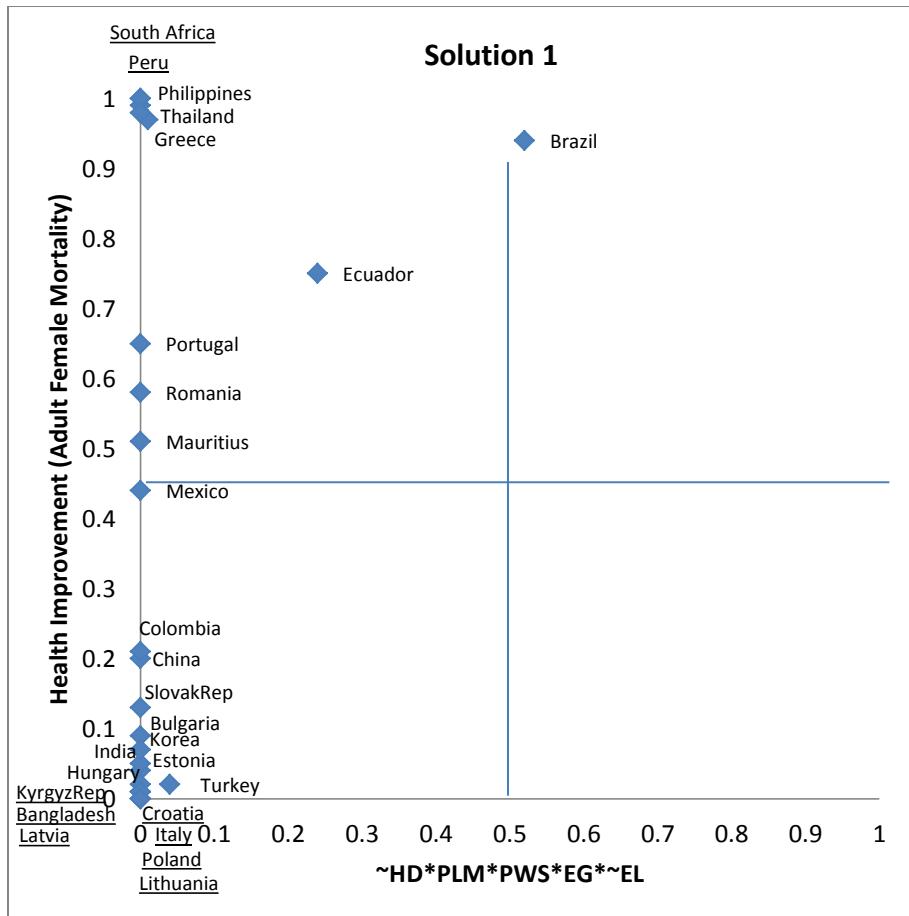


Figure 28 Solution Path 1 XY plot

8.2.2 Collection of Empirical Material and Causal Mechanism

The results of these efforts need to be understood in the context of very limited sources of data. In collecting empirical evidence for this solution path, the dearth of data on the conditions of Brazilian T&C workers was an immediate concern. Few studies (in the English language) were found which have focused on the social or health impacts of the T&C sector in Brazil. Exceptions include two case studies which investigate the working conditions of T&C workers in terms of ergonomics (Melo Junior, 2012) and life style behaviours (Sant'Ana & Kovalechen, 2012). Another exception includes work which draws attention to the working conditions of migrant workforces in Brazil (Bastia & McGrath, 2011). However, literature on the country's social policies along with industrial reports, which focus on the more economic aspects of the sector, do provide some important insights in regards to this solution path.

A range of areas within the EMCONET framework are considered in the context of this solution path including labour market and welfare state policies,

employment conditions, and working conditions. Overall however, process tracing efforts are unable to uncover a precise mechanism linking changes in the T&C industry to the improvement of adult female mortality rates in Brazil. Reasons for this will be made clearer below. Nonetheless, process tracing efforts undertaken in this solution path do bring into greater focus important considerations for future work in this area.

8.2.3 Findings

The textile and clothing industry in Brazil is reported to be the second largest employer in the country, after the automobile industry. Recent figures estimate the sector employs 1.7 million workers and another 8 million indirectly (Knight, 2011). Females are noted to account for between 70-75% of this employment (Knight, 2011; Melo Junior, 2012) and for many, the T&C sector is their first experience in the labour market (Melo Junior, 2012). Over 65% of Brazilian T&C workers are reported to be employed in small and medium sized firms (between 5 and 99 workers) and 34.5% in large factories (more than 100 workers) (Knight, 2011). Large factories represent only 3.4% of T&C factories in the country (Knight, 2011).

Evidence suggests that a considerable number of external migrants (namely from Bolivia) are employed in the sector (Bastia & McGrath, 2011), but precise figures were not uncovered. For these external migrants, working conditions in the sector are noted to be particularly poor and characterized by long working hours, forced labour, and unsafe conditions (Barrie, 2011; Bastia & McGrath, 2011). Little work has focused on the working conditions in T&C factories employing Brazilians. As previously mentioned, exceptions to this include studies which have focused on the working conditions of T&C workers in terms of ergonomics (Melo Junior, 2012) and life style behaviours (Sant'Ana & Kovalechen, 2012). However, these studies shed little light on the industry's overall conditions.

A report written for the ILO's Decent Work Agenda summarizes working conditions in Brazil through the year 2007. This work finds that recent increases in the country's minimum wage (particularly in 2003) significantly improved the purchasing power of many Brazilians. The report finds that wage laws seem to be mostly adhered to within the country, except in rural areas where agricultural work often goes unpaid. On the other hand, data shows that many Brazilians have excessive working hours: 35.5 percent of Brazilian workers worked more than 44

hours in 2007, and 20.3 percent more than 48. However, this is a phenomenon noted to be more common among men than among women: in 2007 only 25.2 percent of women worked more than 44 hours and 13.7 percent worked more than 48, versus 42.2 and 25.2 percent respectively for men. In terms of labour unions, 18.1 percent of the formal workforce is unionized in Brazil (and 17% of women).

Industry reports confirm that after 2005, employment in the T&C sector grew (Knight, 2011). If we assume this growth took place alongside relatively decent working conditions and in conjunction with the observation that the T&C sector is a large first-time employer, a potential causal mechanism might take shape which relates the improvement of adult female mortality rates after the MFA phase out to women's enhanced material resources. However, evidence which supports the notion that working conditions in the sector are decent is weak. There are also two other important considerations which question this mechanism.

The first is that growth in the Brazilian T&C sector after 2005 has been related to increases in domestic demand (Knight, 2011). This perhaps questions the assumed relationship between the MFA phase-out and employment change, since the change in employment in Brazil seems to be the result of domestic conditions. However, that increased domestic demand was met by growth in domestic T&C producers is invariably linked to the structure of the post-MFA global T&C market. Indeed, evidence suggests that Brazil had reason for concern in anticipation of the MFA phase-out (ILO, 2005).

The second consideration which questions the construction of a causal mechanism in relation to this solution path is that in 2003, the Brazilian government introduced a conditional cash transfer programme called 'Bolsa Familia'. This programme provides a monthly transfer of income to poor and extremely poor households. By 2006, the programme covered 11 million household, and has been noted for its role in reducing poverty and inequality (Sánchez-Ancochea & Mattei, 2011). In public health literature, the programme has also been associated with reductions in childhood mortality (Rasella, Aquino, Santos, Paes-Sousa, & Barreto, 2013).

8.2.4 Summary

With these complications in mind, it is difficult to construct a causal mechanism from the MFA phase-out to the improvement of adult female mortality rates in Brazil. Greater attention to the conditions of the Brazilian T&C sector is much needed. This is especially true given the industry is noted to be the second largest employer in the country, with a great many more indirectly dependent on the sector.

8.3 Solution Path 2: Italy, the Slovak Republic, Korea and Portugal

8.3.1 Introduction

The second solution path concerns high income countries. It relates decreases in T&C employment after the MFA phase-out to the worsening of adult female mortality rates, regardless of the presence or absence of protective labour market and welfare state policies. As mentioned in Chapter 6, this finding appears puzzling since we might expect protective policies to act as a buffer to the potentially negative impacts of employment loss.

As can be seen in the below XY plot, a range of typical cases are scattered across the second solution path. Also present are cases which are deviant in kind. Such a configuration of cases allows us to explore this solution path through two kinds of comparative case designs: one which looks comparatively at typical cases and one which compares these typical cases with a case deviant in kind.

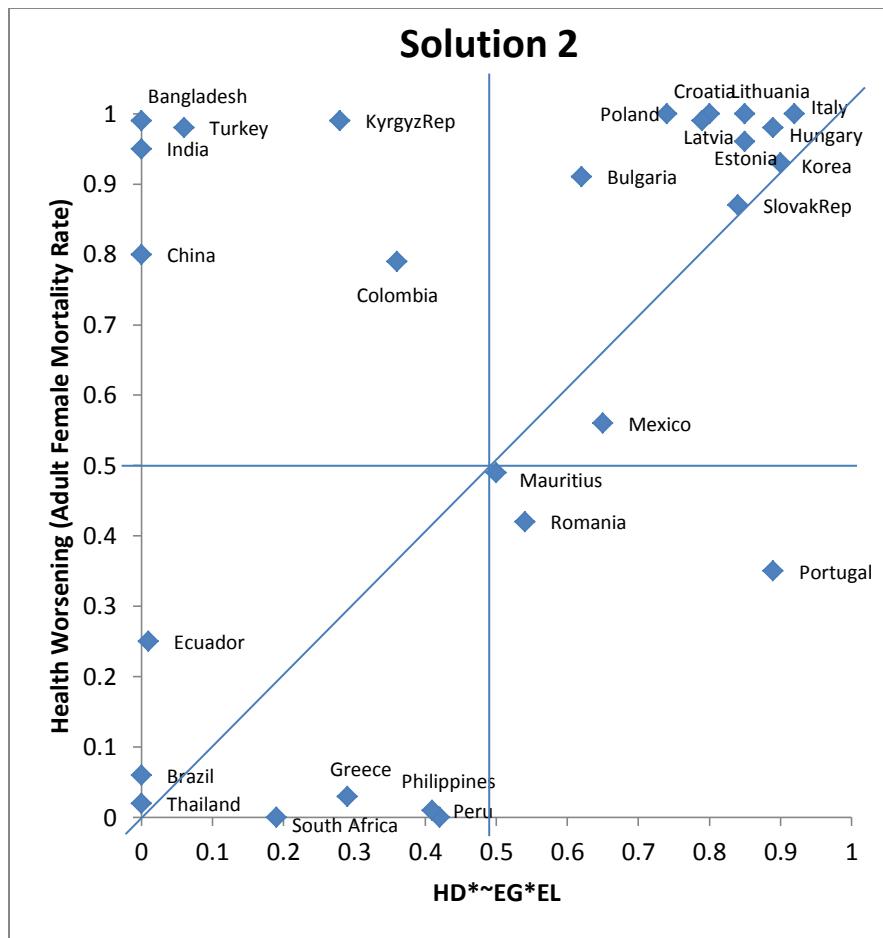


Figure 29 Solution Path 2 XY plot

The most ideal typical case (the one which is the closest to displaying a membership of 1 both in the outcome and solution path) is Italy. For reasons discussed in the previous chapter, the Slovak Republic and Korea were chosen as the best candidates for a comparative investigation with Italy. In terms of cases which are deviant in kind, Portugal represents the best candidate for a comparative design with these typical cases.

8.3.2 Collection of Empirical Material and Causal Mechanism

The four countries investigated in this solution path are represented by three different truth table rows in the fsQCA analysis. While each of these countries are high-income and characterized by employment loss after the MFA phase-out, Italy is additionally characterized by protective labour market policies, the Slovak Republic and Portugal by both protective labour market and welfare state policies, and Korea by neither protective labour market nor welfare state policies.

The theory building process for this solution term began with the collection of empirical material for each of the typical cases. In terms of Portugal, process tracing was specifically used to investigate what about the country stands in contrast to the three typical cases. Portugal is explored last since it would be hard to discern what is anomalous about a case, without knowing what causal mechanism is at play in a typical case (Schneider & Rohlfing, 2013).

The results of these efforts need to be understood in the context of very limited sources of data. In collecting empirical evidence for this solution path, the dearth of data on the conditions of workers was an immediate concern across all four countries. Perhaps unsurprisingly, literature surrounding the T&C sector in these countries is far more focused on matters related to economic growth and firm efficiency than social conditions. Moreover, the type and quality of data available for each country differed. For example, while it was possible to find precise figures on the share of female employment in the sector for Italy, the Slovak Republic and Portugal, precise data was unable to be uncovered for the Republic of Korea.

The areas within the EMCONET framework which were most considered within this solution path relate to various aspects of 1) employment and working conditions, such as the size of T&C firms, the types of labour contracts through which workers were employed, and the types of labour overall which characterize the sector, e.g. formal versus informal, paid versus unpaid, legal versus illegal; and 2) workers' access to social provisions as afforded through various channels of labour market and welfare state protection. What is found is that often the former is a determinant for the latter and that despite countries' characterizations of labour market and welfare state protections, social provisions that may be health promoting or mediating in the face of job loss are often inaccessible to T&C workers (even when they are present and accessible to a country's population at large).

Empirical support which confirms one of the main contextual assumptions of the fsQCA analysis was found for all four countries examined in relation to this solution path. In 2001, almost 70% of the T&C workforce was female in Italy (Rinolfi, 2013), in 2004 71% of the T&C workforce was female in Portugal (Cristovam, 2006) and in the Slovak Republic, women accounted for about 85-86% of total T&C employment for the years between 2000 and 2011 (Cziria, 2013).

Employment in the sector is also noted to be very female-dominated in the Republic of Korea (Moon, 2003), although exact figures for recent years were not available.

8.3.3 Findings

This section will now turn to country-specific evidence which elucidates how labour market and welfare state protections within the three typical cases were largely inaccessible to T&C workers facing employment loss after the MFA. It will then explore Portugal and its anomalous position within the solution path.

Italy

Much of the literature on the Italian T&C sector focuses on firm-related characteristics, specifically those characteristics related to firm size. This is likely because a distinguishing feature of Italian manufacturing in general is the paradigm of “industrial districts”: regionally clustered networks of small craft industries. Industrial districts are very much part of the communities where they are located (McCaffrey, 2013) and are regarded among some labour market economists for their flexibility, efficiency, and innovative capacities (Asheim, 1996).

While the literature on industrial districts and the overall size of firms in the Italian T&C sector is overwhelmingly economically focused, it does take us some way towards the aim of developing a causal mechanism within this solution path. This is because the literature describes where the majority of T&C workers are employed; some important conditions which characterize these forms of employment; how employment conditions influence workers’ access to social provisions in the face of job loss; and finally how the MFA phase-out may have worsened the situation for those who remained employed in the sector.

Within industrial districts, a large majority of Italian T&C workers are employed in small enterprises. These enterprises are typically family-run, specialize in one or a few stages of the production process and because they are in close proximity of one another, facilitate various subcontracting activities within the sector. In 2000, the average Italian T&C firm employed just 10 people (Dunford, 2006). In 2001, 33% of Italian T&C firms employed five or fewer people, and 89% of T&C firms employed 15 workers or fewer, accounting for 37% of total T&C employment. A further 26% of Italian T&C workers in 2001 were employed in firms with fewer than 50 employees (ISTAT, 2004 cited in Dunford, 2006).

In terms of labour protection, Italian small firms are less regulated than larger firms and as such have close ties to more precarious forms of labour such as homeworkers, paid and unpaid family members, child labour, and legal and illegal immigrant labour (Hadjimichalis, 2006). The unregulated nature of small enterprises is a historical institution in Italy, which is argued by some to have contributed to the very development of industrial districts (Dunford, 2006; McCaffrey, 2013; Owen & Cannon-Jones, 2003).

Job decline in the Italian T&C sector has been particularly prevalent in smaller enterprises (Camuffo, Pozzana, Vinelli, & Benedetti, 2008; Dunford, 2006). An important reason for this is the outsourcing of production processes, which are typically undertaken in smaller firms, to countries in Eastern Europe and Asia with cheaper labour (Hadjimichalis 2006; Cumuffo et al. 2008).

That job loss is more predominate among smaller enterprises is an important observation for this solution path. This is because in Italy, support for those facing unemployment is unevenly distributed across different categories of workers, with coverage and generosity increasing with the size of the firm. The most generous systems of income support available are the ‘mobility’ allowance and the ‘CIG straordinaria’. However, these two schemes are only available to workers employed in firms with more than 15 employees (Ciccarone, 2011).

With T&C job loss likely more predominate among smaller firms, and given that much of the informal labour associated with these smaller enterprises would have been without recourse to state provisions, it seems likely that only a small fraction of, the largely female, Italian T&C workers who became unemployed after the MFA phase-out would have been covered by these more generous schemes.

While there exists a more minimal unemployment benefit, to qualify for this scheme workers must have 1) been insured for two years and 2) made at least 52 weeks’ worth of social contributions over the previous two years. Less stringent criteria (78 days worked during the previous year, plus the same insurance requirement) are set for the ‘reduced’ unemployment allowance (Ciccarone, 2011). However, the length and replacement rate of these unemployment benefits are rather low, as payments are only granted for 180 days (extended to 8 months after Jan 2008) and at a 60% rate of replacement (Brugiavini & Peracchi, 2012).

A final consideration in relation to the potential impacts of the MFA phase-out, is the finding that accompanying jobs losses in the Italian T&C sector, has been

an increase in labour market flexibility and a stagnation or decrease of wages for those remaining employed in the sector (Dunford, 2006). Hadjimichalis (2006) additionally reports worsening working conditions after the MFA phase-out for those remaining employed in the sector, such as longer working hours and overtime without compensation.

Slovak Republic

While in Italy the T&C sector began to decline in late the 1990s, at this time in the Slovak Republic, the industry was just beginning to recover from the collapse of communism. Accordingly, much of the literature on the T&C sector in this region is focused on the nature of the industry in the context of post-communist labour markets, as well as how, within this context, firms have responded to various sources of increased competition. While it was mentioned previously that data on workers was scarce for all countries studied within this solution path, this was especially true in the case of the Slovak Republic.

In the Slovak case, evidence towards the construction of an overall causal mechanism is largely based on broader labour market changes which took place after the fall of the state controlled economy and suggestions from within the literature which signal the following: 1) that T&C employment contracts were made more flexible, 2) that consequently, access to unemployment protection was reduced, and 3) that women were not only more likely to face job loss, but were also in a significantly precarious position in terms of finding new work.

As in Italy, T&C production is extremely regionalized in the Slovak Republic⁴. In the communist regime prior to 1989, large state-owned enterprises characterized the sector (Smith, 2003). After the fall of communism, the sector saw its share of manufacturing employment decrease (in the clothing sector specifically, from 3.3% in 1980 to 3.1% in 1990) however, employment began to recover in the mid-1990s as competition drove many western European companies to Central and Eastern Europe for lower production costs. By 1995, 5.8% of total manufacturing employment was accounted for by the clothing sector (ŠÚSR 1993, 1999, cited in Smith, 2003). However, due to the underreporting of labour in unregistered smaller workshops, this figure is likely to have been much higher (Smith, 2003).

⁴ Textile production facilities are centred in the areas of Levice, Liptovský Mikuláš and Ružomberok; clothing production facilities are centred in the areas of Prešov, Trenčín, Púchov and Žilina.

Two main processes characterize changes in the Slovak T&C sector after the fall of communism. First, state owned enterprises became privatized and second, T&C firms became more fragmented. This latter process of fragmentation can be accounted for both by the dissolution of large state-owned firms into smaller independent firms and by the creation of new private firms by managers previously employed in the state-owned enterprises. For example, in 1990 six independent firms were created out of one of the large state-owned firms (Smith, 2003). While data on the exact distribution of employment across different sized firms could not be found, these processes suggest at least a significant downsizing of firms (Smith, Pickles, Buček, Begg, & Roukova, 2008; Smith, 2003). Moreover, it has been suggested that one way in which larger firms have managed the threat of competitive pressures is by subcontracting certain production processes to smaller enterprises (Smith, Pickles, Begg, Roukova, & Buček, 2005).

Due to the division of labour across different sized firms and to the nature of competitive pressures (Smith, Pickles, et al., 2008), it seems likely that it was largely these smaller firms which would have characterized employment loss after the MFA phase-out. There are two reasons why this is an important observation in relation to this solution path. First, as mentioned above, smaller firms are more likely to be unregistered with the government and, as in Italy, utilize unreported (sometimes family) labour without formal employment contracts (Smith, 2003). Therefore workers who lost employment in these unregistered firms would have been ineligible for the country's unemployment insurance.

Second, running parallel to changes in the T&C sector were changes in the country's overall labour code and welfare state policies (Barancová, 2006; Cerami, 2010; Fisher, Gould, & Haughton, 2007; Kahhancová & Martisková, 2013; A. Smith, Stenning, Rochovská, & Świątek, 2008). A main implication of these changes is that short-term labour contracts, prevalent in smaller T&C firms, became deregulated, with such workers no longer able to access the protections afforded to those with more permanent contracts (Pickles & Smith, 2010). Although T&C workers employed on the basis of fixed-term still would have had access to unemployment insurance, amendments to the Slovak Labour Code in 2001 created greater space for new types of precarious employment which limited employees' access to this type of protection. Emerging forms of employment included those related to self-employment and various types of work agreements which exist outside of formal

employment relationships (and therefore do not come under the purview of standard labour market regulations) (Barancová & Olšovská, 2011; Kahhancová & Martisková, 2013). Unfortunately, precise data on the type of contracts held by Slovak T&C workers could not be found however, within the literature there are suggestions that changes in the Labour Code indeed had negative repercussions on smaller firms within the T&C sector (Pickles & Smith, 2010). Moreover, the T&C sector in the Slovak Republic is largely characterized by uneven power relations where smaller subcontracted enterprises occupy a particularly tenuous position (Smith, 2003). This perhaps adds confidence to suggestions that changes in the Slovak Labour Code negatively impacted workers employed in smaller T&C firms.

There are two further points to consider in the construction of a causal mechanism when it comes to the Slovak Republic. First, even for those workers who did have access to unemployment insurance after the MFA phase-out, benefits in the Slovak system would have been low (Ferrarini & Sjöberg, 2010; Palme, Nelson, Sjöberg, & Minas, 2009). To be eligible for unemployment between 2005 and 2009, full-time employees must have made 36 months of contributions during the previous four years of employment. Net replacement levels during this period were around 65% (Palme, Nelson, Sjöberg, & Minas, 2009): a figure which assumes further significance when we consider the average monthly wage in the Slovak T&C sector represented only 58% of the average wage in manufacturing industries in 2005 (Wikileaks, 2006d). Moreover, in 2006, only around one-fifth of the registered unemployed actually received unemployment benefits (Palme, Nelson, Sjöberg, & Minas, 2009).

Second, women in the Slovak Republic were not only the first to lose jobs, but they also found it more difficult to find new work and experienced longer periods of unemployment (Smith, Stenning, et al., 2008). For those not eligible for social assistance benefits, Smith (2003) notes that both informal and illegal forms of work offered additional income for women workers in the post-communist context.

Korea

There are two classes of literature which cover the Korean T&C sector and shed additional insight on a causal mechanism for this solution path. The first discusses the T&C sector in relation to gender divisions within Korean society and the second discusses the economic potential of the industry, especially in the context

of the East Asian Crisis of 1997. Whereas the latter class of literature highlights characteristics of the sector's decline over time, the former sheds light on the type of workers employed within the industry and their unequal position in relation to a number of labour market considerations. As in the cases of Italy and the Slovak Republic, evidence suggests that women workers losing their employment in the Korean T&C industry were likely to have experienced difficulty finding alternative employment in the formal sector. Moreover, for the type of woman employed in the sector, access to social protection after job loss would likely have been dismal.

Despite major job losses and drastic reductions of incomes brought about by the 1997 financial crisis, Korea remained during this time one of the top T&C exporting nations in world. After experiencing rapid industrial development in the T&C sector in the early 1960s, job loss in the sector began in the late 1980s (as manufacturing industries of higher order began to take precedence) and continued through the late 1990s as high domestic wages sent production facilities abroad in search of lower costs (McNamara, 1999). The phase-out of the MFA presented a further significant challenge to the industry (Truett & Truett, 2011).

As in other aspects of Korean society, employment within the T&C sector is stratified according to gender. Whereas men have historically maintained more managerial and skilled positions, women have held the large majority of low skilled, low-paid positions and as such have represented the majority of the workforce (Moon, 2003). Over time however, the type of female worker within the industry has shifted. In the early stages of the industry, the majority of female employees were younger than 25 and unmarried (Moon, 2003). As the Korean economy developed and as opportunities for young women to pursue education increased, younger females were more likely to find employment in the service sector. At the same time, two processes made the T&C sector an attractive source of employment for married women over the age of 25. First, a decline in fertility made it possible for older, married women to take up employment (Berik, 2008), an expectation which was held especially in regards to married women from low- and middle-income families (Moon, 2003). Second, within the sector, subcontracting was becoming the dominant form of employment (Lee, 1993). This facilitated home-based employment opportunities for the many married women over the age of 25, who remained largely responsible for family-related work (Lee, 1993; Moon, 2003).

Concrete evidence which points to the specific type of employment loss after the MFA phase-out could not be found. However, Cooke (2010) suggests that Korean women in general are disproportionately selected for redundancy; a point which Berik (2008) notes is particularly true in the case of manufacturing. Moreover, as Korean T&C exporters have moved out of T&C production and into export management (Lee, 1993), historically job loss has been concentrated amongst the female-dominated and lower-skilled subcontracting tasks (McNamara, 1999).

This would have two important implications for women working in the T&C sector. First, family commitments would have made it difficult to find an alternate job in the competitive formal employment market, rendering employment in the informal sector more likely (Moon, 2003). This is likely to be true regardless of a woman's prior education and her skills from previous work (Moon, 2003).

Second, while important strides have been taken to incorporate gender sensitive social policies into Korea's welfare state system (J. Cho, Kwon, & Ahn, 2010), benefits for women experiencing unemployment remain largely out of reach (Cho, Cho, Surendra, & Cho, 2013). A main reason for this is that, as many Korean scholars have pointed out, female employees are on the whole overrepresented in nonstandard and irregular jobs (J. Cho et al., 2010; Chun, 2006; Cooke, 2010; B.-H. Lee, Lee, & International Labour Office, 2007); a point which is also made in direct reference to the Korean T&C sector by the Korean Women Workers Association (KWWA, 2008).

For example, unemployment insurance wasn't introduced in Korea until 1995. At this time, coverage applied to firms with more than 30 employees. As a response to the 1997 financial crisis, this was expanded in 1998 to cover workers in all firms with at least one employee. The eligibility criterion was also relaxed after the financial crisis: entitlement contributions which began at 12 months of contribution were ultimately reduced to one month and benefits increased both in generosity and in duration (Shin, 2000). However, despite these changes, a considerable number of low-income households remain excluded from these provisions. From 1997 to 2000, the share of employees covered by Korea's unemployment insurance scheme increased rapidly from 32% to 50.5%; however until 2004 this figure remained largely stable (Lee & Park, 2006 cited in Ku, 2007). A common explanation for such a low coverage rate is that many workers in non-standard employment are unable or

unwilling to make contributions towards social insurance schemes (Cho et al., 2013; Kim, Khang, Cho, Chun, & Muntaner, 2011; Ku, 2007). In 2007, for example, the participation rate among non-standard workers was strikingly lower than among permanent employees: 33% vs. 83.9% (Korean Ministry of Labour 2007, cited by Kim, Khang, Cho, Chun, & Muntaner, 2011).

Portugal

As mentioned above, the search for evidence in the case of Portugal proceeded with a slightly different aim than it did for the 3 typical cases of Italy, the Slovak Republic and Korea. Across the latter cases, a causal mechanism seems to emerge which points to a variety of conditions which both would have restricted unemployed female T&C workers from protective social provisions, and left little alternative for them in terms of other job opportunities. With this mechanism in mind, the search for evidence in the case of Portugal sought to identify what about the country is comparatively anomalous. Evidence for this case is drawn from two main sources: first, a case study carried out by Cristovam (2006) which explores the restructuring of the T&C sector in Portugal and second, a literature base which is primarily concerned with broader Portuguese labour market conditions.

As in the typical cases, the T&C sector in Portugal is regionally distributed with the majority of work carried out in the Northern Region (Norte). There is also evidence which suggests that T&C firms are typically smaller, albeit perhaps less so than in Italy (Cristovam, 2006). In 2002, about half of Portuguese T&C workers were employed in enterprises with fewer than 50 employees, 22% worked in micro-sized companies with fewer than 10 employees, and 17% worked in large companies with more than 250 workers (Eurostat, cited by Cristovam, 2006).

As previously mentioned, about 71% of the 2004 Portuguese T&C workforce was female. Only about 10% were under the age of 25 and perhaps most remarkably, over 30% were above the age of 50 (Eurostat, cited in Cristovam, 2006). After the MFA phase-out, Portuguese females losing work in the T&C sector, like their counterparts in Italy, the Slovak Republic and Korea, would also have found it difficult to find alternative employment opportunities (Cristovam, 2006). However, there are suggestions within the literature that at least some of the older workers would have been able to take early retirement and as such would have been entitled to state pensions (Cristovam, 2006).

Where evidence between the three typical cases and Portugal is most starkly less aligned, relates to the form of labour female T&C workers undertake. In the typical cases discussed above, female T&C work is largely characterized as non-standard (and as such, access to social provisions is restricted). In Portugal, although it could not be established with a high degree of certainty, evidence begins to suggest that the T&C labour force is largely characterized by a standard, full-time employment relationship (Tavora & Rubery, 2013). Despite the fact that Portugal is known for its high level of temporary employment, Debels (2004) notes that the main sectors associated with these types of contracts are services, agriculture, and mining. An important potential implication of this finding is that unlike many of the T&C workers in Italy, the Slovak Republic and Korea, many of the Portuguese workers losing employment after the MFA phase-out would have been entitled to the country's unemployment benefits.

Another way in which Portugal differs from the three typical cases is in its particularly strict employment protection legislation. Important aspects of such legislation are the labour laws which govern collective dismissals. According to Portuguese law, a collective dismissal occurs when an “employer terminates, either simultaneously or within a period of three months, the contracts of employment of at least two employees in the case of enterprises with up to fifty employees and at least five employees in enterprises with over fifty employees, on the grounds of permanent closure of the enterprise, the closure of one or more departments, or the need to reduce the workforce for structural, technological or economic reasons” (Eurofound, 2014).

While evidence could not be found on the instances of collective dismissals in the T&C sector following the MFA phase-out. There is at least partial evidence that such a course of action has been undertaken in the sector. In 2001, a textiles company employing 300, mostly female, workers initiated a collective redundancy procedure when it decided to discontinue its production in the country (Cristovam, 2001). In 2003, at least two T&C companies initiated collective redundancy procedures (EMCC, 2003). Given the scale of employment loss and the distribution of workers across firms of different sizes, it stands to reason that many of the redundancies following the phase-out of the MFA would also have fallen under the purview of these regulations.

Between 2005 and 2009 a company undertaking a collective dismissal would have needed to notify a representative of the workers (e.g. a workers commission, or trade union representative) as well as the Ministry of Employment and Social Security, of the proposed redundancies. This regulation is intended to initiate a round of negotiating in regards to 1) how the dismissal would be carried out, and 2) the adoption of measures which would mediate the impact of the dismissal, for example through re-training procedures or early retirement. Whether or not an agreement would have been reached, employees were meant to be provided with a written notice of dismissal at least 60 days in advance. Workers dismissed through a collective redundancy would have been entitled to time off to find other employment (two working days per week, without loss of pay) and financial compensation in the form of one month's basic pay for each year of service, subject to a minimum of three months' pay (ILO, 2014a).

For example, in one of the cases of collective redundancy mentioned above, an agreement was reached between the employer and its employees. This agreement stipulated that all workers would receive a 3% salary increase before the closing of the firm to allow for higher levels of compensation after dismissals, as well as a longer duration of compensation (EMCC, 2003). However, it must be noted that there is also evidence of companies going bankrupt, who then close operations without giving prior notice to their workers, and in some cases denying them compensation for hours already worked (EMCC, 2003). In cases of the latter kind, it is not clear what happens to redundant T&C employees since the regulation surrounding collective dismissals stipulates that an employee is still entitled to their severance pay, even in the event that an employer fails to comply with the necessary regulations (ILO, 2014a). While alternative job opportunities are noted to be low for female Portuguese T&C workers, this legislation at least provides workers with, in addition to standard unemployment insurance, a minimum severance pay, and possible re-training opportunities or early retirement.

In Italy, as with other labour laws, regulations regarding collective dismissals apply only to firms with more than 15 employees (ILO, 2014a). For reasons discussed above, many of unemployed female T&C workers would have had little recourse to any related social provisions.

In the Slovak Republic, between 2004 and 2009, regulations stipulated that a collective dismissal took place whenever an employer terminated the employment relationship of at least 20 employees over a period of 90 days (Munková, 2004). This would have had little impact on smaller enterprises identified as particularly relevant in the Slovak case, particularly for those employing less than 20 employees. Moreover, changes in the country's Labour Code in the early 2000s, as discussed above for making labour contracts more flexible, also introduced flexibility into the regulations concerning collective dismissals. Consequently, workers placed on agreements for work performed outside a typical contractual employment relationship would have lost any entitlements related to collective redundancy procedures (Barancová & Olšovská, 2011). Finally, in Korea, there is no statutory severance pay corresponding to collective dismissals (ILO, 2014a).

That T&C work in Portugal seems to be largely characterized by a standard employment contract, and that collective dismissals procedures are fairly strict, encompassing firms of all sizes, suggests that female Portuguese T&C workers are less 'hidden' than their counterparts in Italy, the Slovak Republic and the Republic of Korea. This notion is perhaps further supported by the government's engagement with Microsoft in 2006 in a public-private partnership which aimed to provide re-training services to over 3,000 T&C employees losing employment. However, by 2008 only 680 of the 1700 employees which completed the training were re-employed, and largely in jobs with worse pay and security than their previous position in the T&C industry (Euractiv, 2008).

8.3.4 Summary

The aim of collecting evidence within this solution path was to build a narrative about the characteristics of each country's T&C sector in way which might begin to explain the results of the fsQCA analysis. The fsQCA solution path relates T&C employment loss in high income countries to the worsening of adult female mortality rates, regardless of the presence or absence of protective labour market and welfare state policies.

Working inductively backwards from available evidence, a plausible causal mechanism has taken shape which suggests that despite countries' characterizations of protective labour market and/or welfare state policies, female T&C workers in the typical cases explored are employed under conditions which render 1) alternative

employment opportunities either particularly scarce or precarious and 2) access to social provisions, which may be health promoting or mediating in the face of job loss, largely inaccessible. In Portugal, a deviant case, evidence suggests that female T&C workers are, by contrast, employed under conditions which grant access to social provisions in the context of job loss, despite the shortage of alternative employment opportunities.

At first glance this causal mechanism might seem to explain the puzzling results of this solution path quite nicely. However, there are two main reasons to be cautious with these results.

The first reason relates to data availability issues. The evidence presented in this solution path originates from small literature bases which are not directly concerned with the impact of the MFA phase-out on T&C workers. For this reason, the preliminary nature of this causal mechanism needs to be emphasized.

Second, while evidence points to the importance of labour market and welfare state policies, it is not immediately clear how these conditions are in turn, impacting health. The EMCONET framework (Benach et al., 2007) highlights a range of different pathways from these macro-level conditions to health. These pathways relate to specific working conditions, to material deprivation, inequalities and to considerations of health related behaviours, physio-pathological changes and psychosocial factors. However, data on these conditions were not uncovered in this work. Therefore the precise mechanisms influencing health remain unclear.

It is also worth noting that in investigating Portugal as a case deviant in kind, the purpose was simply to see what distinguished it from the other countries. Finding that workers have a more ‘standard’ employment relation with greater access to social protection is not to say that these conditions were sufficient for the improvement of female mortality rates in Portugal.

Despite these considerations, the results of these case studies do highlight an important problem which is the often hidden nature of T&C workers in high income countries. These results also highlight the need to be cautious about how we measure and implement indicators of labour market and welfare state policies in public health work. On the basis of this case study work, it may be questioned whether countries were characterized correctly in relation to the fsQCA. However, since the search for

evidence in this solution path focused primarily on uncovering data in specific relation to T&C workers, the findings do not necessarily reflect on countries' overall labour market and welfare policies.

8.4 Solution Path 3: Bangladesh

8.4.1 Introduction

The third solution path concerns countries which are not high income. It relates increases in T&C employment to the worsening of adult female mortality rates in the presence of protective labour market but not protective welfare state policies. As can be seen in the below XY plot, there is only one typical case in this solution path: Bangladesh. There are no cases which are deviant in kind. For this reason, only Bangladesh will be explored in the context of this solution path.

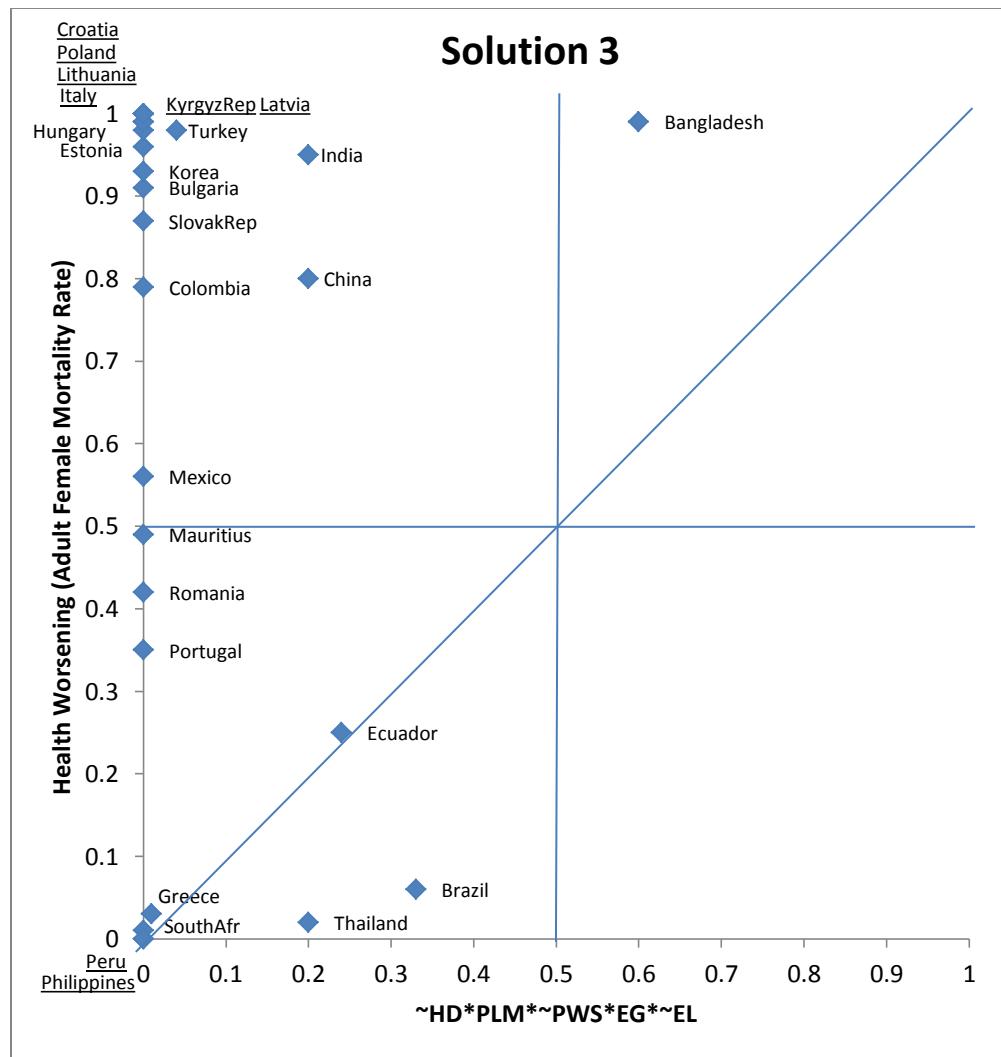


Figure 30 Solution Path 3 XY plot

In the discussion of the fsQCA results, it was suggested that this solution term might signify that in the absence of protective welfare state policies, T&C employment growth may be detrimental to female mortality in a way in which protective labour market policies alone are unable to compensate for. However, it was also noted that it seemed problematic that Bangladesh was characterized as having protective labour market policies since it is often spotlighted in the media for its dangerous T&C working conditions. This may signal a flaw with the indicator more generally or perhaps something exceptional about Bangladesh.

Case study work undertaken towards understanding the previous solution path found that despite countries being characterized as having protective labour market or welfare state policies, T&C workers are often excluded from important protective provisions. Consequently, it was considered whether such countries were characterized incorrectly or instead whether T&C workers represent an exception to these characterizations. A similar question should be posed to the case of Bangladesh.

8.4.2 Collection of Empirical Material and Causal Mechanism

The collection of empirical material in this solution path aimed to build a narrative about the Bangladeshi T&C sector in a way which would shed light on the characteristics of the sector's employees, the role of the MFA phase-out in facilitating job growth, the employment and working conditions in the sector, and how these conditions might have interacted with the characteristics of the country's labour market and welfare state policies. As with the previous solution path, the aim here was to inductively work backwards in search of a plausible causal mechanism that might help explain the solution's results.

In contrast to the other cases examined thus far, much more scholarly work has been carried out relation to the Bangladeshi T&C sector, especially in the context of its social consequences. However, it should be noted that the results presented here are not meant to provide an exhaustive account of this literature. Rather, the literature search focused on the above mentioned conditions and evidence was interpreted as causally relevant with the EMCONET framework in mind.

A range of areas within the EMCONET framework are considered in the context of this solution path: labour market regulations, welfare state policies, employment conditions, working conditions, and material deprivation. The perhaps

most prominent result to emerge out of the literature is that the T&C sector in Bangladesh can be characterized by a range of complex and often contradictory processes in terms of how it impacts the lives of its largely female workforce. This relates primarily to the type of firms within which women work and the different spheres of women's lives which are impacted, sometimes negatively, sometimes positively, by work in the sector. Ultimately a causal mechanism emerges which points to poor working conditions in the context of lacking labour market and welfare state protections.

Focusing first on the importance of the industry for Bangladesh's economy, the type of workers employed in the T&C sector, and its overall characteristics, the results will then move to explore these complex and contradictory processes in greater depth. The summary will conclude with how these issues begin to form a plausible causal mechanism for the worsening of adult female mortality in the country following the MFA phase-out.

8.4.3 Findings

It is hard to overstate the importance of the T&C sector for the Bangladeshi economy in general and for women's employment in the country specifically. Clothing exports compromise nearly 80% of the country's total exports (Staritz, 2010) and in 2004 the sector was estimated to account for 9.5% of Bangladesh's GDP (Knowles, Reyes, & Jackson, 2006). Employment in the industry makes up 40% of total manufacturing employment and grew from 0.2 million in 1986 to 3 million in 2010 (Staritz, 2010). Moreover it is estimated that the industry generates another 10 million jobs, indirectly (Staritz, 2010).

It is widely acknowledged that the Bangladeshi T&C industry has its roots in the MFA quota system. Newly emerging economies in Asia are noted to have opened production facilities in Bangladesh in the late 1970s to take advantage of additional quotas (Kabeer & Mahmud, 2004b). Whereas there were only 130 T&C firms in Bangladesh in 1983, by 2000 this figure had grown 3,000 and by 2009 to 5,500 (Kabeer & Mahmud, 2004b; Staritz, 2010). Because the sector was so dependent on the quota system for its development, employment loss was predicted to follow the MFA phase-out. However, despite these pessimistic forecasts, the Bangladeshi sector continued to grow after 2005. Some attribute this post MFA phase-out growth to safeguard protections initiated by the US and EU which protected the country from

Chinese competition (Ahmed, 2009), however such measures are noted by World Bank scholar Staritz (2010) to only partially explain the sector's growth after 2005.

Work in the Bangladeshi T&C sector has historically been, and continues to be, carried out by a predominately female workforce. However, there are signs that the share of employment held by females has been decreasing since the 1990s when women represented 90% of the workforce (Staritz, 2010). Figures place the share of female employment in the 2000s anywhere from 90 to below 80 percent (Kabeer & Mahmud, 2004; Ahmed, 2009; Staritz, 2010). Females working in the sector are typically noted to be young and unmarried, although Kabeer (2004) and Khatun et al. (2007) cite observations that dispute such characteristics. Work from Kabeer (2004) indicates that between 40-50% of female T&C workers are married, and many with children. Khatun et al. (2007) notes that by 2006, 59% of female T&C workers were married and that the average age of women workers increased from 19 in 1990 to 25 in 2006. Ninety percent of Bangladeshi female T&C workers are migrants from the rural countryside⁵ and with strong ties to their rural households, they are noted to send as much as of 2/3 of their income back to their family (Ahmed, 2009). For this reason, the industry is also noted for its broader role in the reduction of rural poverty (Kabeer & Mahmud, 2004a). Moreover, for the majority of women T&C workers, employment in the sector often constitutes their first job (Kabeer & Mahmud, 2004b). Importantly, Kabeer and Mahmud (2004a) find that growth in the T&C sector has opened up new employment opportunities for females from rural areas where otherwise there exists little opportunity for employment.

The T&C industry in Bangladesh produces two distinct categories of products: woven garments and knitwear. While the former employs mostly women, the latter is dominated by males. Bahkt and colleagues (2002 in Staritz, 2010) estimate that in the early 2000s, women made up only 33% of the knitwear industry. This is because production processes associated with knitting require a higher technological skillset and women are often placed in jobs requiring less skills (Khosla, 2009). Another reason for the lower participation of women in the knitting industry is that factories often run an overnight shift and prior to 2006, women were not allowed to work between 10 p.m. and 6 a.m. (Starlitz, 2010).

⁵ Similar to the experience of other T&C-reliant countries, the Bangladeshi T&C sector is very much regionalized with the majority of firms in the capital city, Dhaka and Chittagong⁵ Other important areas for T&C firms are Gazipur, and Narayanganj (Staritz 2010).

Growth in the knitwear industry characterized part of the overall job growth in the sector after the MFA phase-out and is an important factor behind declining shares of female employment in the T&C sector overall (Starlitz, 2010). It is also an important source of the growing gap between men and women's wages. This is because as jobs become more technologically advanced, men's wages rise faster than women's (Khosla, 2009). However, women are often paid lower wages than their male counterpart even when the job is the same and when education and experience are controlled for (Khosla, 2009).

As mentioned above, the T&C sector impacts the lives of female workers and their families in a range of complex and sometimes contradictory ways. To begin with, the type of firm within which women work can have inconsistent consequences for workers.

Firms in the Bangladeshi T&C sector can be distinguished on the basis of whether they operate inside or outside an export processing zone (EPZ). Those operating inside an EPZ are mostly large and foreign owned. While foreign investment played an important role in establishing the T&C industry in Bangladesh, of the 4303 firms operating in 2006, only 83 were whole or partially foreign-owned (IMF, 2007). In 2005, the average EPZ firm had 1150 employees (IMF, 2008 in Starlitz, 2010) and the average non-EPZ firm had 500 employees (IMF, 2007). Employment in EPZ firms has been noted to account for about 12% of total T&C employment (Kabeer & Mahmud, 2004a). Thus the vast majority of T&C employment is in locally owned non-EPZ firms.

It is widely acknowledged that workers' rights, earnings, and working conditions are better within EPZ factories (Absar, 2003; Ahmed, 2006; Berik & Rodgers, 2010; Hossain, 2011; Kabeer & Mahmud, 2004a, 2004b; Siddiqi, 2009; USAID, 2007). For example, in a survey of EPZ (n=125) and non-EPZ (n=737) T&C workers, Kabeer and Mahmud (2004a) found that EPZ workers had higher levels of earnings than non-EPZ workers. Results of this survey also demonstrated that EPZ workers were more likely than non-EPZ workers to have some sort of employment contract, to have access to paid leave and maternity leave, to receive overtime pay and to receive other benefits such as transport, accommodation, medical care and child care facilities. In a study by Sidiqqi (2009), workers in non-EPZ firms are found to experience more frequent and severe forms of sexual harassment than those

in firms within an EPZ. Moreover, evidence aggregated by Absar (2003) shows that incidences of illnesses vary along the lines of whether a worker is employed in an EPZ or non-EPZ firm, with greater incidences of illnesses among non-EPZ workers.

Another dimension of contradiction in the lives of Bangladeshi female T&C workers relates to how the sector has improved their social and economic freedom yet simultaneously exposed them to physically demanding and dangerous working conditions.

Hossain (2011) provides a recent overview of literature which supports this point. Highlighted in this work are a range of qualitative studies which demonstrate that female T&C workers are motivated to work in the industry not only out of economic need, but also because the industry affords them “a meaningful expansion of their agency” (Hossain, 2011, p. 29). Kibra (1998) for example, finds that female T&C workers perceive their employment as providing a means for investment in their family (e.g. by enabling the education of siblings or children) and that work in sector allows them to relieve their family of the financial burden of supporting a daughter, avoid unwanted marriages, and increase their personal autonomy. However, as Hossain (2011) points out, how much control female workers retain over their income varies with respect to their household situation. In some cases women are required to relinquish their wages to their husbands, while in others they retain more control. This latter point underscores a wider message found in the literature which is that Bangladesh remains characterized by patriarchal structures and as such there are limits to the levels of empowerment that women can achieve through improved economic capabilities (Hossain, 2011; Sidiqqi, 2009) However, research also shows that female employment in the T&C sector has created room for negotiation and manoeuvring within these structures (Hossain, 2011; Sidiqqi, 2009).

With regard to the level of wages in the T&C sector, Bangladesh has had a minimum wage since 1994. However, at this time, no mechanisms were put in place to tie it to inflation or other macroeconomic changes (Ahmed & Peerlings, 2009). In response to labour unrest in 2006, the government increased the monthly minimum wage for the first time from Tk930 to Tk1662 (\$24). This is noted to have fallen short of living wage estimates (Staritz, 2010) and the international poverty line of \$1 a day (Berik & Rodgers, 2010). Wages have also been noted to be particularly low in the context of rising food prices (Staritz, 2010), and Absar (2001) notes that some

workers' pay fall below this regulated threshold. However, work from Kabeer and Mahmud (2004a) indicates that wages in the majority of the sector were almost twice as high as the monthly per capita poverty line set by the Government of Bangladesh in 2000 (725Tk in urban areas and 635Tk in rural areas). On this basis the authors suggest that female T&C workers were able to support at least one other adult or two children with their T&C wage.

Overall, wages in the T&C sector are on average higher and more regularly paid than wages in alternative work (Kabeer & Mahmud, 2004a). Therefore, while survival on a T&C wages is no doubt difficult, women's economic capabilities on average have nevertheless been enhanced (Khosla, 2009).

Standing in contrast to improved autonomy and economic capabilities however, are the physically demanding and dangerous working conditions which characterize production in the sector. Perhaps the greatest indicator of the physical demand of T&C work is the finding that few workers can last more than a few years in the sector. High turnover is partially explained by women leaving their employment to marry or have children, but evidence also points to women leaving the sector because of the toll work takes on their health (Kabeer & Mahmud, 2004a; Hossain, 2011). Islam and Zahid (2012) even note the fainting and death of employees on the T&C work floor due to exhaustion and over work.

Broadly speaking, working conditions in the T&C sector are largely characterized by long hours, unsafe factory conditions, sexual harassment, physical and verbal abuse, a lack of security and employment benefits; denials of freedoms to associate and bargain collectively; and often underpaid or delayed wages (Berik & Rodgers, 2010; Hobson, 2013; Hossain, 2011; Islam & Zahid, 2012; Kabeer & Mahmud, 2004a; Siddiqi, 2009). In total, while Bangladesh has ratified 7 of the 8 fundamental ILO conventions, all are poorly enforced (Berik & Rodgers, 2010).

A workplace safety concern that has been particularly visible of late is the lack of fire safety equipment and structural integrity in buildings where T&C work is undertaken. Hobson (2013), citing evidence from the International Labor Rights Forum, highlights that at least 1800 T&C workers have died in factory fires and building collapses since 2005. Hossain (2011) additionally points to an estimate from

a Bangladeshi newspaper that some 60% of T&C firms lacked fire safety equipment in 2010.

A World Bank study (Lopez-Acevedo & Robertson, 2012) which examined the T&C sector in Bangladesh in the period after the MFA phase-out, found that while working conditions improved for men, for women they worsened. In this study, working conditions were measured by dummy variables for holding a regular paid job and working for 40 or less hours per week. The authors speculate that “female workers increasingly face a trade-off in which they obtain jobs and higher wages at the expense of a nonregular paid (hence less stable) position” (p. 80).

Other evidence about the impacts of the MFA phase-out in Bangladesh also suggests that working conditions would have worsened for women after 2005. To begin with, it is noted that while production increased in the sector, it moved away from foreign owned firms in EPZs (Staritz, 2010). This means a greater number of women would have been exposed to the unsafe working conditions characterizing the majority of the sector in non-EPZ firms. In addition, the phase-out has been noted to increase pressures on firms to lower prices (Staritz, 2010). Work by Kabeer and Mahmud (2004b) suggests that firms which are under greater price pressures have worse working conditions when they do not deal directly with buyers (a characterization which fits a large majority of Bangladeshi T&C firms). For this reason, it seems likely than that any increase in price pressure would also place many women T&C workers in a more precarious working situation.

Complicating matters further is the recognition that buyers are simultaneously putting greater pressure on producers to improve working conditions however, again, this pressure is felt greatest among firms which deal directly with buyers such as those in EPZs (Kabeer & Mahmud, 2004a).

8.4.4 Summary

The aim of collecting evidence within this solution path was to build a narrative about the characteristics of Bangladesh’s T&C sector in way which might begin to explain the worsening of adult female mortality rates after the MFA phase-out. Again, this solution path relates T&C employment growth in not high-income countries to the worsening of adult female mortality rates in the presence of protective labour market but not welfare state policies. Prior to collecting evidence, it

was questioned whether this solution suggests that T&C employment growth is detrimental to female mortality in a way in which protective labour market policies alone are unable to compensate for. It was also noted that it seemed problematic that Bangladesh was characterized in the fsQCA analysis as having protective labour market policies since it is often spotlighted in the media for its dangerous T&C working conditions.

In pulling together the various findings examined in this solution path, what emerges is a complex set of conditions which can impact female Bangladeshi T&C workers in a range of contradictory ways. If we examine these conditions in relation to the EMCONET framework, we find that while female T&C workers are on average exposed to a range of risky and dangerous working conditions, work in the sector can also mean improvements in material circumstances and in the perhaps more psychosocial-related senses of greater self-reliance and autonomy. However, the extent to which these conditions apply can vary according to the type of firm within which women work and their household-specific characteristics.

This finding seems at least to discredit the idea that T&C employment growth in Bangladesh is detrimental to female mortality in a way in which protective labour market policies alone are unable to compensate for. Evidence that would have supported this idea might have shown for example, at least a minimum standard of decent working conditions but perhaps wages that were below subsistence levels. Instead, working conditions were found to be extremely poor and livelihoods enhanced by the income earning opportunities the sector generates, especially in the context of otherwise scarce opportunities.

Evidence suggests that after the MFA phase-out, T&C job growth for females largely took place in non-EPZ firms. These firms are associated with both lower wages and worse working conditions when compared to EPZ firms. Evidence also suggests that working conditions were likely to deteriorate further in these non-EPZ firms after the MFA phase-out due to increasing price pressures. On this basis, a plausible causal mechanism seems to emerge which relates the worsening of adult female mortality rates in Bangladesh to females' greater exposure to dangerous working conditions. However, while working conditions are no doubt an important aspect of how the Bangladeshi T&C sector impacts female workers' health, these conditions are inevitably linked to an absence of protections that provide an effective

means for workers to address workplace grievances. For this reason, the causal mechanism which takes form within this solution path must direct attention not just to poor working conditions, but also to an absence of labour market and welfare state protections.

The fsQCA analysis characterized Bangladesh as having protective labour market but not welfare state policies. This latter characterization is supported by the evidence found within the solution path, but the former is not. In the previous solution path it was considered how the results of case study work might reflect back on the fsQCA. It was noted that since evidence is considered in specific relation to T&C workers, generalizing back to countries' overall labour market and welfare state policies is difficult. This is true also in the case of this solution path. However, as in the previous solution path, it clear that of central importance to future analyses of the health impact of liberalization processes is the accessibility of labour market and welfare state protections specifically for the workers most impacted by these processes.

8.5 Solution path 4: The Kyrgyz Republic

8.5.1 Introduction

The fourth solution path relates non high-income countries to the improvement of infant mortality rates in the context of protective labour market policies (but not protective welfare state policies) and either T&C employment loss, or no change in T&C employment. As can be seen in the below XY plot, both Azerbaijan and the Kyrgyz Republic represent the most ideal-typical cases in this solution path. Peru is the only case which is deviant in kind.

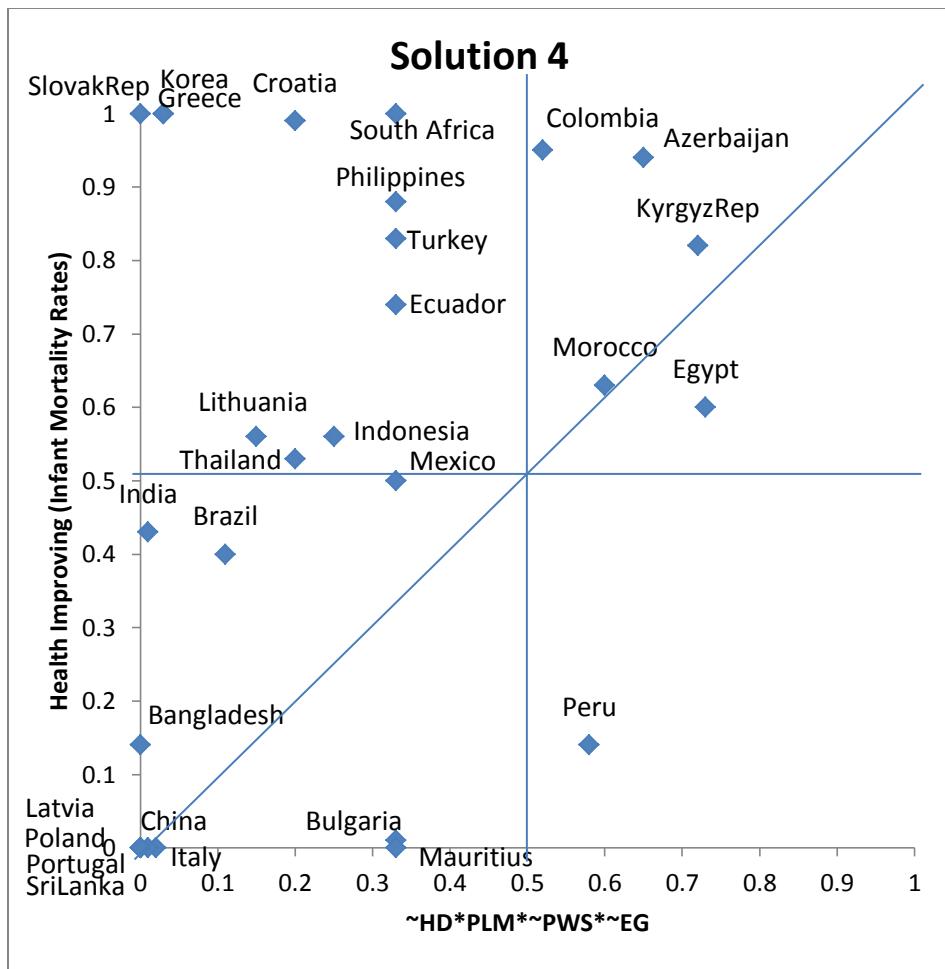


Figure 31 Solution Path 4 XY plot

As mentioned in the previous chapter, the Kyrgyz Republic was chosen to explore this solution path since it has a higher membership in the solution path.

8.5.2 Collection of Empirical Material and the Causal Mechanism

The process tracing exercise for this solution term began with the collection of empirical material for the Kyrgyz Republic. As with previous solution paths, the goal was to build a narrative about the country's T&C sector and inductively work backwards in search of a plausible causal mechanism that might help explain the solution's results. In terms of Peru, process tracing was specifically used to investigate what about the country is anomalous when compared to the Kyrgyz Republic.

Again, the results of these efforts need to be understood in the context of data sources and availability. In collecting empirical evidence for this solution path, a dearth of data (in the English language) was found across the two countries, both in terms of the sector's more general characteristics and in relation to employment and

working conditions. In regards to the Kyrgyz Republic, evidence about the type of workers employed in the sector, and their employment conditions, comes largely from a report published by the Harvard Business School (Birkman, Kaloshkina, Khan, Shavurov, & Smallhouse, 2012) and work undertaken by the ILO (2012b). Evidence from these reports is then related to characteristics of the country's labour market and welfare state policies. Comparative data for T&C sector in Peru is drawn mainly from a series of embassy cables which were released by Wikileaks in 2010. These cables were sent by the Peruvian Embassy in Lima to government officials in the U.S..

The areas within the EMCONET framework which were most considered within this solution path relate to various aspects of 1) employment conditions, particularly the types of labour which characterize the sector, i.e. formal versus informal and 2) workers' access to social provisions as afforded through various channels of labour market and welfare state protection. As with other solution paths, it is found that despite countries' characterizations of protective labour market policies, provisions which may be health promoting or mediating in the face of job loss are often inaccessible to T&C workers (even when they are present and accessible to a country's population at large). However, in contrast to previous solution paths, this finding does not facilitate the construction of a plausible causal mechanism. As will be discussed in greater detail below, this is because the implications of these findings seem to be at odds with the improvement of infant mortality rates. Moreover, T&C employment loss in the Kyrgyz Republic is found to be accompanied by employment growth in the informal T&C sector. For these reasons, and others which will be made clearer below, a potential causal mechanism begins to emerge which relates the improvement of infant mortality rates in this solution path to other changes in the country's macroeconomic context.

The next section will turn to country-specific evidence which elucidates the importance of the T&C sector for employment within the Kyrgyz Republic as well as its economy as a whole. It will be shown that labour market protections within the Kyrgyz Republic would have been largely inaccessible to T&C workers facing employment loss after the MFA phase-out. It will also be shown that employment loss in the formal T&C sector was accompanied by employment growth in the

informal sector. Peru and its anomalous position within the solution path will then be explored.

8.5.3 Findings

Kyrgyz Republic

The Kyrgyz Republic became an independent state in 1991, after the collapse of the USSR. As in the Slovak Republic, the T&C sector emerged when the country was characterized by a planned economy and at this stage the sector was characterized by a small number of large firms. After the demise of the planned economy, the sector experienced a sharp decline, and subsequently rose again (in a more fragmented form) in the early 2000s (Birkman et al., 2012).

As in other countries studied thus far, the T&C sector is regionally concentrated in the Kyrgyz Republic, with 96% of firms located in the city of Bishreck. Between 70-85% of workers in the sector are women, and the large majority of firms are micro (employing 10 people or less) or small enterprises (employing 10-50 people) (Birkman et al., 2012).

Informality in the sector is high (ILO, 2012b; Schwegler-Rohmeis, Mummert, & Jarck, 2013) with estimates placing the share of informal firms between 40 percent (ILO, 2012b; Umurzako & Burzhubaev, 2010) and 60-80 percent (Birkman et al., 2012). In relation to these former estimates, the informal economy is defined as “all economic activities by workers and economic units that are – in law or in practice – not covered or insufficiently covered by formal arrangements. Their activities are not included in the law, which means that they are operating outside the formal reach of the law; or they are not covered in practice, which means that – although they are operating within the formal reach of the law, the law is not applied or not enforced; or the law discourages compliance because it is inappropriate, burdensome, or imposes excessive costs” (ILO, 2012b, p. 4). In the latter estimates, informality is defined as the “diversified set of economic activities, enterprises, and workers that are not regulated or protected by the state” (Birkman et al., 2012, p. 16).

The sector is also recognized as an important contributor to overall employment in the country. Schwegler-Rohmeis and colleagues (2013) estimate that 8% of the country’s total employment in 2010 was generated by the T&C industry. Birkman and colleagues (2012) place this figure at 12 percent. Moreover, the ILO

(2012b) estimates that the sector's contribution to the country's GDP was 3 percent in 2010, although Birkman et al. (2012) estimate that this figure ranges from 5-15 percent.

According to Birkman et al. (2012), official T&C employment figures began to decline in 2007. Importantly for this solution path however, this is noted to likely reflect a shift of employment to the informal sector, rather than a strict loss of jobs. This suggestion is perhaps further supported by the steady increase of T&C exports from the country (ILO 2012b) and broader characterizations of the country's labour market which point to a high level of informality across many sectors including the T&C industry (Bernabè & Kolev, 2003).

This presents a scenario which is in some ways similar to the findings revealed across high income countries losing T&C employment (i.e. in solution path 2). In these countries the post MFA phase-out context is characterized by not only employment loss, but also by a shift to more precarious working and employment conditions. In Italy for example, job loss in the T&C sector was noted to be accompanied by worsening working conditions for those remaining employed in the sector (Hadjimichalis, 2006). In the Slovak Republic, it was suggested that liberalization of the country's labour code, in conjunction with increased competitive pressures, meant that many of those employed in the sector saw their contracts effectively deregulated (with decreased access to social provisions once unemployed). In the Kyrgyz Republic, a shift in employment from the formal to informal sector also represents a move to more precarious employment conditions. However, in this case a fundamental difference is that on the whole, the number of those employed in the sector, may not have changed.

In the shift from formal to informal employment, those losing formal employment are likely to be many of the same individuals taking up informal positions. On the one hand, this relates to the regional concentration of the sector, whereby companies are unlikely to be moving to locations out of reach of former formal employees, as well as to the context of high unemployment in the country which renders alternative employment opportunities particularly scarce, especially for women (Bernabè & Kolev, 2003).

However, a perhaps more convincing reason why this is likely relates to the structure of informality in the sector. Based on interviews with T&C firms and other key experts in the country, an ILO (2012b) study finds that there are two broad types of informality across the industry. The first type corresponds to legally registered firms which underreport certain aspects of their production, such as their output, the number of workers, or profits. The second type corresponds to enterprises which work without formal registration. These establishments do not report anything at all to the government. In regards to the former, the ILO study reports that “practically all registered enterprises work half “in shade” and use various means to hide data on actual production output” (p. 4). If we keep this mind and also remember that official production figures were increasing while formal employment figures were decreasing, it stands to reason that many formal employees were shifted to the informal market, while remaining employed at the same firm. This notion is perhaps further supported by 1) the low productivity which characterizes the country’s T&C labour force (Birkman et al., 2012; ILO, 2012b), which demonstrates that increases in production figures are unlikely to have resulted from increased productivity; and 2) the fact that literature on the sector does not point to a reduction in formal firms.

For these reasons, an increase in informality in the T&C sector in the Kyrgyz Republic likely means an increase in employment precariousness for formal employees rendered informal. It may also mean an increase in informal employees who may not have been previously employed by the sector, but this was neither confirmed nor rejected by the available literature.

Workers losing employment in the formal sector were unlikely to benefit from any job loss related social provisions. This follows from two main considerations. First, while the Kyrgyz Republic does have collective redundancy provisions (including severance pay) within its labour code, like Italy, workers employed in firms with fewer than 15 employees are excluded from these provisions (ILO, 2014a). Since so many of the country’s T&C firms are micro and small enterprises, it is unlikely many dismissals would have fallen under the remit of these regulations. Second, unemployment benefits in the Kyrgyz Republic are afforded on the basis of a social insurance system. However, the ILO (2012b) reports that in analysing social security records, the majority of T&C workers do not make social security contributions.

Beyond social provisions, working conditions within T&C sector of the Kyrgyz Republic are reported to be quite poor. According to the ILO (2012b), small T&C firms “are usually located in basements of multi-storey buildings, private homes or on the territory of abandoned large industrial buildings” (p. 5). Labour laws and sanitary norms are acknowledged to be largely ignored, especially in firms which operate informally, employees often work 14-17 hours a day, and labour accidents are underreported or hidden. Wages in the sector are lower than both the average wage in the country and in the manufacturing industry specifically. Moreover, any increases in wages have been noted to be offset by simultaneous rises in consumer prices. Interestingly, women’s wages are reported to be 2-5 percent higher than men’s (ILO, 2012b). It is also important to note that much of the work in the sector is seasonal, so for many, employment in the sector is insecure. For formal employees shifting to informal employment it is not clear how much of a change they would have seen in working conditions.

While the nature of insights considered above have facilitated plausible causal mechanisms in relation to changes in adult female mortality rates in other countries examined thus far, it is difficult to reconcile these considerations with the improvement of infant mortality rates in the current solution path. A primary reason for this is the dearth of information about the types of women working in the sector. Evidence for instance, documenting the age and other socio-cultural characteristics of female T&C workers in the Kyrgyz Republic could not be found. If we assume women in the Kyrgyz Republic are having children while employed in the T&C sector, it is unlikely that workers shifting from formal to informal employment experienced a change in working conditions that might have facilitated the conditions sufficient to improve infant health in their families, such as an increase in wages, or improvement of maternity related labour provisions. However, if employment on a whole grew, then for women newly employed in the informal labour market, their incomes are likely to have improved, although this must be reconciled against the typically poor working conditions under which they are employed and the resulting impact this might have on infant health.

Aside from these direct impacts on infant health, the MFA phase-out may have facilitated changes in the sector with indirect impacts on infant health. Two factors highlighted by the EMCONET framework (Benach et al., 2007) which may

be important in this regard are economic inequality and material deprivation. In regards to the former, data from the World Bank indicates that economic inequality, as measured by the Gini coefficient, worsened in the Kyrgyz Republic between 2004 and 2009 (World Bank, 2013). Whether or not this worsening may have been influenced by changes in the T&C sector, it is difficult to relate it to an improvement in the country's infant mortality rate since higher inequality is typically associated with worse infant health (Wilkinson & Pickett, 2010).

In regards to material deprivation, it is worth noting that social spending as share of total government spending has been declining since the late 1990s (Mogilevsky & Omorova, 2011). Moreover, social assistance programs in the Kyrgyz Republic are noted to be ineffective at reducing poverty on account of their extremely low benefit levels (Hoelscher & Alexander, 2010). However, poverty levels are noted to have declined in the country from 2002 -2007 (Birkman et al., 2012), which might go some way towards explaining improved infant mortality rates. Here poverty is measured by the share of people living on less than \$2 and \$1.25 a day. A report by United Nations Department for Social and Economic Affairs (Mogilevsky & Omorova, 2011) examines the Kyrgyz Republic's achievement towards the Millenium Development Goals and also notes declines in poverty throughout the 2000s. Here poverty is measured by a general poverty line and an extreme (food) poverty line. Whereas the later "reflects the cost of a food basket consumption of 2100 Kcal per person per day...[the former] takes the food poverty line and adds-up the cost of basic non-food expenditures" (p. 8). This report accounts for these declines largely by pointing to increased economic growth. Such growth is postulated to have been pro-poor due to the prevalence of low inflation, and to the increasing value of remittances which are estimated to account for as much as 28% of the GDP and largely accrue to the poor rural areas (Mogilevsky & Omorova, 2011).

Peru

As mentioned above, the search for evidence in the case of Peru proceeded with a slightly different aim than it did for Kyrgyz Republic. Across the latter case, it is hard to reconcile changes in the T&C sector with an improvement in the country's infant mortality rates. The search for evidence in the case of Peru sought to identify

what about the country is comparatively anomalous when considered in relation to the Kyrgyz Republic.

As in the Kyrgyz Republic, T&C firms in Peru are found to be generally small. In the export sector 92% of firms are reportedly small and medium-sized, although larger companies are noted to generate 65% of the value in exports (Wikileaks, 2007b). An embassy cable sent in 2006, reveals that just 25 companies accounted for 72 percent of the country's total apparel exports (Wikileaks, 2006b).

Overall, T&C employment is noted to account for 3% of total employment in the country. However, the accuracy of these figures is questioned on the grounds of a significant informal sector (Wikileaks, 2005).

The Peruvian T&C sector is noted to have expanded greatly in the early 2000s, largely due to the implementation of a free trade agreement with the US: the Andean Trade Promotion and Drug Eradication Act. This agreement which was implemented in 2002 granted T&C exports duty free access to the US. Under it, Peruvian textile exports to the United States are noted to have increased 60%: from \$532 million in 2002 to \$887 million in 2004 (Wikileaks, 2005). Expansion in the sector was primarily seen in the export sector, versus the domestic market, which increased by only 2% from 2002 to 2005 (Wikileaks, 2005).

The distinction between firms serving the export and domestic market is important in regards to this solution path because in the otherwise absence of evidence, it tells us something about where employment changes were likely to have occurred in the industry. In the post MFA phase-out context, firms operating in the domestic market were hit hard by cheap Chinese imports while sales in the export market continued to grow (Wikileaks, 2005, 2006, 2007). For this reason, it seems likely that some of the declines in employment figures originate from job loss in the domestic market. However, it may also be the case that job loss occurred in smaller T&C firms in the export market, since larger T&C firms are typically described as better at managing competitive pressures.

Unlike evidence found in relation to the Kyrgyz Republic, sources of evidence in relation to Peru do not indicate that job losses in the formal sector were accompanied by growth in informal sector. If true, this would represent a significant

departure from the experience of the Kyrgyz Republic documented above however, sources of evidence are far less diverse and informative in the Peruvian context.

8.5.4 Summary

The aim of collecting evidence within this solution path was to explain the results of the fsQCA which relate the improvement of infant mortality rates in non-highly developed countries to either T&C employment loss, or no change in T&C employment, in the context of protective labour market policies but not protective welfare state policies.

Working inductively backwards from available evidence, a causal mechanism seems to emerge which accounts for an improvement in infant mortality rates in the Kyrgyz Republic via wider macroeconomic changes. Interestingly, employment loss in the country's T&C sector seems to indicate a shift to informal T&C employment. However, how likely it is that this experience is replicated across other countries characterized by this solution path is unclear. Sources of evidence examined in relation to Peru do not indicate that job losses in the formal sector were accompanied by growth in informal sector. Future analyses examining employment changes in the T&C sector should consider this type of interaction between the formal and informal sector.

Evidence examined in relation to the Kyrgyz Republic does, however, demonstrate that employment conditions within the sector became more precarious after the MFA phase-out. This finding is aligned with evidence found in relation to other countries, such as Italy and Bangladesh, where working conditions are suggested to have worsened after the MFA phase-out.

8.6 Solution Path 5: Korea

8.6.1 Introduction

The fifth solution path relates high-income countries to the improvement of infant mortality rates in the context of non-protective labour market and welfare state policies and employment loss. As can be seen in the below XY plot, Korea is the only typical case within this solution path and there are no cases deviant in kind. For this reason, Korea is the only country studied in relation to this solution path.

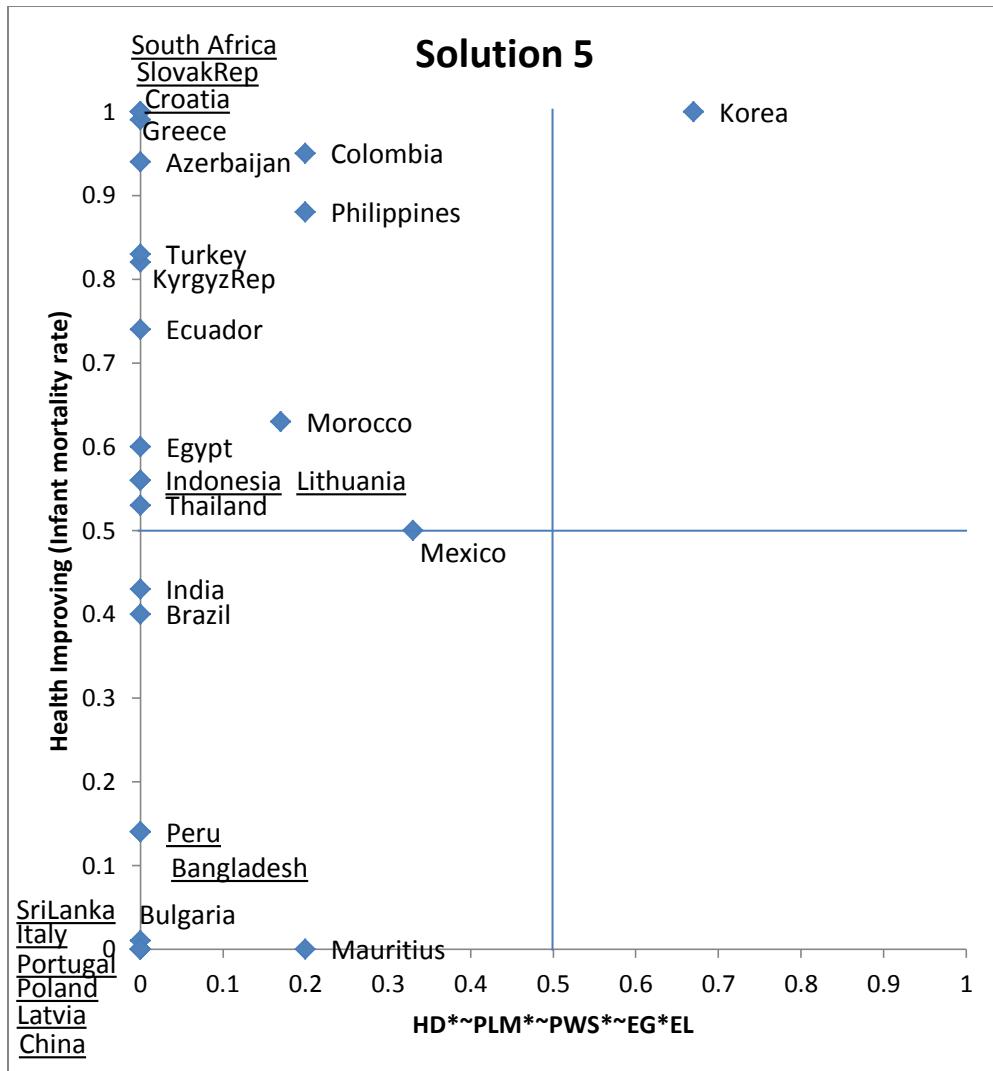


Figure 32 Solution Path 5 XY plot

8.6.2 Collection of Empirical Material and the Causal Mechanism

The process tracing exercise for this solution term began with an evaluation of the empirical material which was previously collected for Korea. Next, the aim was to inductively work backwards in the search of a plausible causal mechanism that might help explain the results of the present, fifth solution path.

As with previous solutions, the results of these efforts need to be understood in the context of data sources and availability. Process tracing efforts undertaken in regards to the second solution path found that there are two classes of literature which cover the Korean T&C sector. The first discusses the T&C sector in relation to gender divisions within Korean society, and the second discusses the economic potential of the industry, especially in relation to the East Asian Crisis of 1997. While this literature offers some general information about Korean T&C workers and

how the MFA phase-out might have facilitated employment loss, it is limited in what it can tell us about changing infant mortality rates in the country.

The areas within the EMCONET framework which were most considered in relation to this solution path concern various aspects of employment conditions, as well as to workers' access to social provisions as afforded through various channels of labour market and welfare state protection.

Data collected in reference to Korea in the second solution path suggest that after the MFA phase-out, T&C workers losing employment were likely to be women engaged in various home-based subcontracting activities (Berik, 2008; Lee, 1993; McNamara, 1999; Moon, 2003). Evidence also suggests that these workers were likely to be married, over the age of 25, and have children (Berik, 2008; Lee, 1993; Moon, 2003). However, precise data on the demographics of the industry, and on those losing employment could not be found.

It was also noted that for workers losing T&C employment, family commitments would have made it difficult to find alternative employment in the competitive formal market (Moon, 2003), and that such workers would have had little access to unemployment benefits, or severance pay (ILO, 2014b; Kim et al., 2011; Kim, Khang, Muntaner, Chun, & Cho, 2008; Ku, 2007).

With limited data on the characteristics of Korean T&C workers it is hard to relate changes in infant mortality directly to changes in T&C employment after the MFA phase-out. This is because while evidence suggests that many women working in the sector are mothers, it is not clear at what point women began their employment in the sector, before or after having children. If women began working in the sector before having children, then employment loss may have directly impacted infant mortality rates. However, if women became employed in the sector after having a child, direct impacts are likely to be less relevant. This relates to the low fertility rates in the country. The World Bank (2013) reports that in 2005, women had on average 1.1 children. Therefore, if women began working in the sector after having a child, it would be unlikely that they'd be having another. Of course, it is possible that fertility rates are higher among T&C workers, however no data could be found to support either side of this possibility.

It is also hard to relate changes in T&C employment to changes in infant mortality rates indirectly. The EMCONET framework identifies economic inequality and material deprivation as two population-level factors which may influence health (Benach et al., 2007). However, neither the OECD nor the World Bank has data on income inequality in Korea prior to the MFA phase-out. Data from the OECD (OECD, 2014) suggests that income inequality remained relatively stable between 2006 and 2009 with the following reported Gini coefficients for each respective year: 0.306, 0.312, 0.314, 0.314⁶. In relation to material deprivation, work by the Asian Development Bank (Asian Development Bank, 2012b) indicates that the majority of social spending in Korea goes to the non-poor. For this reason, even if employment loss in the sector was accompanied by economic growth in the industry, it is unlikely such growth would have improved the country's social spending in a way which would have led to decreased material deprivation among the poor.

8.6.3 Summary

With these complications in mind, it is difficult to construct a causal mechanism from the MFA phase-out to the improvement of infant mortality rates in Korea. Better data on the demographics of Korean T&C workers is much needed to better understand the health impacts of changes in the sector.

8.7 Solution path 6: China and Thailand

8.7.1 Introduction

The sixth solution path relates non-high-income countries to the worsening of infant mortality rates in the context of non-protective welfare state policies and employment growth, regardless of protective labour market policies. As can be seen in the below XY plot, China is the only typical case within this solution path. While Bangladesh and India represent cases which are deviant in degree, only Thailand and Indonesia are cases which are deviant in kind and thus suitable for comparative case work. As mentioned in the previous chapter, Thailand is best positioned to be examined comparatively with China since its membership in the solution path is closer to China's than that of Indonesia's.

⁶ The OECD "Gini coefficient is based on the comparison of cumulative proportions of the population against cumulative proportions of income they receive, and it ranges between 0 in the case of perfect equality and 1 in the case of perfect inequality" (OECD, 2014).

8.7.2 Collection of Empirical Material and the Causal Mechanism

As with the previous solution paths, the process tracing exercise for this solution term began with the collection of empirical material for China. In terms of Thailand, process tracing was specifically used to investigate what about the country is anomalous when compared to China.

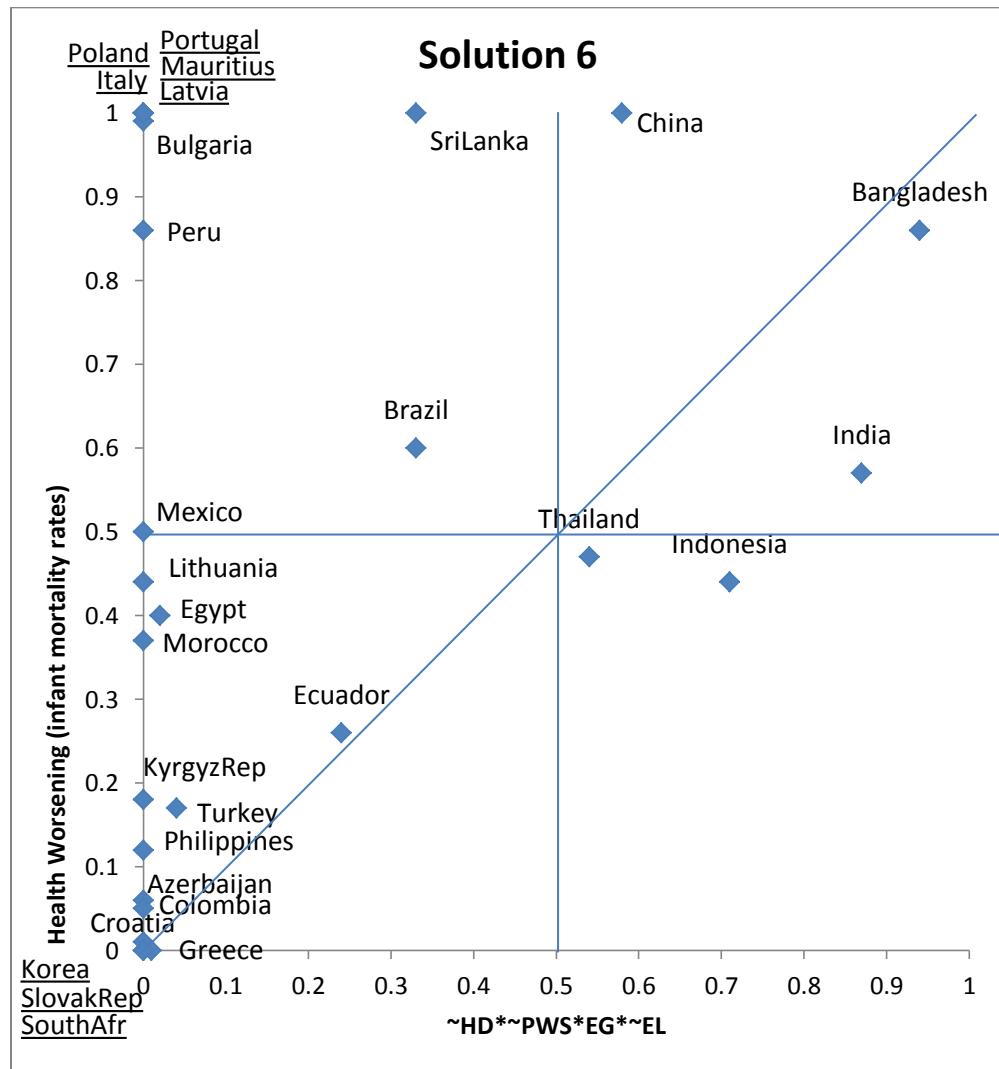


Figure 33 Solution Path 6 XY plot

As with previous solutions, the results of these efforts need to be understood in the context of data sources and availability. In regards to China two main sources are relied upon to understand the condition of T&C workers. One is a drafted report prepared by Davin (2001) for the United Nations Research Institute for Social Development's Project on Globalization. This report investigates the impact of export-oriented manufacturing on Chinese workers. Another is a peer-reviewed journal article by Pun Ngai (2004) which seeks to understand the working conditions

of female migrant workers in China. In regards to Thailand, in-depth anthropological work on Thai T&C workers by Pangsap (2007) is relied upon to structure an overall picture of the sector. However, this work does not account for the T&C sector immediately prior to and following the MFA phase-out. For this reason work which investigates the competitiveness of the sector is drawn upon to understand how these characterizations may have changed. Overall, there is a relatively small literature base on the Thai T&C sector.

The areas within the EMCONET framework which were most considered within this solution path relate to various aspects of employment and working conditions, as well as material deprivation and workers' access to social provisions as afforded through various channels of labour market and welfare state protection. Similar to the case of Bangladesh, it is found that Chinese T&C workers face poor working conditions in the context of non-protective labour market and welfare state policies. While the demographics of the Chinese T&C workforce makes it difficult to directly link changes in T&C employment to infant mortality rates, an indirect pathway is identified which may have a role in explaining worsening infant mortality rates in the context of increased T&C employment growth.

8.7.3 Findings

China

In China the T&C sector is rooted in liberalization policies which began in 1979 with the creation of special economic zones. As with other cases studied thus far, the sector is regionalized with production concentrated in the provinces of Zhejiang, Guangdong, Jiangsu, Shanghai, Shandong and Fujian (Wick, 2009). The majority of Chinese T&C workers are reported to be female, although precise figures could not be found (Barrientos & Howell, 2006; Wick, 2009).

As predicted by analysts, China has been a clear winner following the MFA-phase out, at least economically speaking. Immediately after the phase-out, Chinese exports to US and EU markets surged. For example, Chinese exports of cotton trousers to the US increased by 1500% and exports of pullovers to the EU increased by 534% (Kowalski & Molnár, 2009). Consequently, both the US and EU initiated bilateral talks with China through which 'memorandums of understanding' were reached (via the safeguard clause of China's accession into the WTO). These memorandums of understanding limited Chinese T&C exports across a range of

products categories until the end of 2007 in regards to the EU, and until the end of 2008 in regards to the US (Kowalski & Molnár, 2009). Despite these safeguard provisions, the WTO's International Trade Statistics reveals that China continued to capture a growing share of the global T&C market following the MFA phase-out. For example, China increased its exports of clothing to the global market by 20% in 2005, 29% in 2006 (WTO, 2007), 21% in 2007 and by 4% in 2008 (WTO, 2009). It increased its exports of textiles to the global market by 23% in 2005, 19% in 2006 (WTO, 2007), by 15% in 2007 and 17% in 2008 (WTO, 2009).

As in Bangladesh, the majority of women working in the sector are internal migrants and come from rural areas where otherwise little opportunity for paid employment exists. There are also Chinese T&C homeworkers who are not internal migrants; however, many of these women subcontract work from factories which produce for the domestic market (Hong Kong Christian Industrial Committee, 2003) and thus were presumably minimally impacted by export growth following the MFA phase-out. Evidence suggests that non-migrant homeworkers who subcontract work from export-oriented factories represent a relatively small proportion of the total export-oriented workforce, which is largely composed of migrant workers (Hong Kong Christian Industrial Committee, 2003).

Similar to the experience of female Bangladeshi T&C workers, employment in the sector has facilitated an improvement in the autonomy of many rural born female Chinese T&C workers (Davin, 2001). However, and also similarly to the Bangladeshi case, these improvements have been limited by patriarchal structures (Davin, 2001; Ngai, 2004) and exist in tandem with extremely poor working conditions including long working hours, underpayment of and/or delayed wages, unsafe factory conditions, a lack of security and employment benefits; and denials of freedoms to associate and bargain collectively (Barrientos & Howell, 2006; China Labour Watch, 2011; Davin, 2001; Ngai, 2004; Rodgers & Berik, 2006; Wick, 2009). Such conditions persist despite legislated protections which stipulate the requirement of employment contracts, maximum working hours and various health and safety regulations (Barrientos & Howell, 2006; Ngai, 2004; Rodgers & Berik, 2006).

Moreover, related to their status as migrant workers, Chinese female T&C workers are generally excluded from social welfare schemes (Davin, 2001). These conditions arise in part from a national policy, 'hukou', which restricts the rights of

rural workers in urban areas. Broadly speaking, hukou is a system of household registration which officially identifies a person's place of residence. It originated in 1958 as a means to restrict migration from rural to urban areas. It also set out to prescribe an individual's eligibility for state provided benefits such as health care, retirement provisions, and subsidized food and housing. Due to their agricultural ties, those living in rural areas were cast off as self-sufficient and largely excluded from social provisions (Chan & Buckingham, 2008).

Once China began liberalizing its economy, hukou was revised to accommodate a growing demand for low-skilled workers in export-oriented industrial sectors. Rural workers are now able to migrate to urban areas for work however, the system continues to divide citizens into a rural and urban class, whereby the former are "treated as inferior second-class citizens" (Chan & Buckingham, 2008). Rural migrants for instance, are afforded only temporary residence and are required to return to their rural home once an employment contract ends (Davin, 2001). That T&C contracts are rarely put into writing (as required by law) or are otherwise extremely short-term (Wick, 2009), means that hukou is a significant source of labour control. Moreover, migrant workers have no claim to urban social provisions which remain largely unmatched in rural communities where familial support is the dominant means of social protection (Ngai, 2004).

Hukou also impacts other aspects of female T&C workers' lives which are important when considering pathways to health. To begin with, the temporary residency status of migrants restricts workers' ability to stay in the city. This contributes to the fact that the majority of female T&C workers are housed in dormitories, owned by factories or local authorities (Ngai, 2004). This 'dormitory labour regime' (Ngai, 2004) also aligns with patriarchal structures within Chinese society (Davin, 2001; Ngai, 2004). Conditions within the dormitories include overcrowding, inadequate ventilation and lighting, and restriction of workers' freedom of movement (e.g. via dormitory curfews) (Davin, 2001; Ngai, 2004). Moreover, that accommodation is so tightly bound to employment is another significant source of labour control. Workers living in factory dormitories are reportedly prevented from looking for alternative work (Ngai, 2004) and from developing relationships with men (Davin, 2001).

Hukou stipulations also restrict the registration of marriages and childbirth by rural migrants in urban areas. This contributes to the type of worker employed in the T&C sector: young (under 25), single, and childless. This also means that workers often leave the sector after three to five years of employment in order to marry and procreate (Ngai, 2004). In terms of this solution path, a main implication here is that changes in T&C employment are unlikely to have a direct impact on infant mortality rates, since the majority of those employed in the sector are not becoming pregnant.

However, as has been discussed with other cases, growth in the sector after the MFA phase-out may have had an indirect impact on conditions which are important for infant health at the population level. Economic inequality and material deprivation are two areas identified by the EMCONET framework as important for health (Benach et al., 2007). In regards to the former, data from the World Bank indicates that economic inequality, as measured by the Gini coefficient, has remained stable between 2004 and 2008 (World Bank, 2013). In regards to the latter, growth in the T&C sector presumably would have increased the government's spending capacity however, that infant mortality rates worsened suggests that additional factors need to be considered.

Feng and colleagues (2012) undertook an extensive analysis which looked at the determinants of child mortality in 30 Chinese provinces from 1990-2006. Results of the analysis point to the importance of social determinants of health in reducing mortality rates of children under 5. This is an important consideration to take into account since neonatal mortality rates have been shown to account for a high proportion of the under 5 mortality rate in China. In the Gansu province for instance, Yi and colleagues (2011) find that neonatal mortality accounts for 67.6% of under 5 mortality in urban areas and 59.0 % in rural areas. Social determinants identified as important for under 5 mortality in China include mother's education, household crowding and access to clean water and sanitation (Feng et al., 2012). Of these determinants, access to clean water presents the most obvious potential link to the T&C sector.

Industrial growth has been associated with the widespread pollution of Chinese water sources (WHO & UNDP, 2001; World Bank, 2001; C Wu, Maurer, Wang, Xue, & Davis, 1999; Zhang et al., 2010). The T&C sector in particular has been implicated as an especially significant contributor to water pollution in China

(Friends of Nature, the Institute of Public & Environmental Affairs, Green Beagle, Environmental Protection Commonwealth Association and Nanjing Green Stone Environmental Action Network, 2012; Jahiel, 2006; Jun et al., 2012; You, Cheng, & Yan, 2009). While 96% of those living in large cities have access to safe drinking water, this is true of less than 30% of people in rural areas (Tang et al., 2008), many of whose water sources are downstream from T&C production and waste dumping facilities. Contaminated drinking water has been shown to be associated with a range of health problems (WHO & UNDP, 2001; C Wu et al., 1999; Zhang et al., 2010). Importantly for this work, He and Perloff (2013) find that water pollution has a significant negative effect on infant mortality, which may go some way towards explaining the worsening of infant mortality following T&C production expansion after the MFA phase-out.

Changes in air pollution have also been related to changes in infant mortality rates in China (Tanaka, 2012) and as such may represent another environmental pathway through which growth in the Chinese T&C sector contributed to the worsening the country's infant mortality rates.

Thailand

As mentioned above, the search for evidence in the case of Thailand proceeded with a slightly different aim than it did for China. With regards to the latter, a possible causal mechanism emerges which accounts for the worsening of infant mortality rates (following employment growth in the T&C sector) via reference to environmental pathways, particularly through the worsening of waste water and air pollution. With this mechanism in mind, the search for evidence in the case of Thailand sought to identify what about the country is comparatively anomalous.

Thailand's T&C sector shares many important features with China's. To begin with, females account for around 80-90% of the sector's total labour force (International Labor Rights Fund, 2002, The Fair Wear Foundation and Ethical Trading Initiative-Norway, 2007); many are migrants, (although there is a significant share of external as well as internal migrants); and working conditions within the sector are extremely poor: many of the same deleterious conditions found in China are also found in Thailand including long working hours, unsafe factory conditions, delayed or under payment of wages, harassment and abuse and a lack of a written

contract (Pangsapa, 2007; The Fair Wear Foundation and Ethical Trading Initiative-Norway, 2007).

Piya Pangsapa (2007) offers an extensive account of Thai T&C workers in the time period leading up to and after the 1997 Asian financial crisis. On the basis of this work we can distinguish Thailand's T&C sector from China's on at least three related accounts which are important for this solution path. First, the majority of Thai T&C workers do not live in dormitories. While the large majority migrate from rural areas to Bangkok or its suburbs for employment, most live in private, albeit often shared, accommodation. However, factory dormitory-based housing is noted to exist to a minor extent. Second, while precise figures could not be found, evidence from Pangsapa's work suggests that a significant proportion of Thai T&C workers are older, married and having children. Finally, while Chinese workers are typically employed in the industry for a short period of time before getting married and having children, many Thai workers have a long history of working in the sector.

An additional issue to consider is that after the 1997 financial crisis, many production facilities relocated to border areas in search of cheaper labour (Pangsapa, 2007). As a result, migrants from other countries, and informal workers in rural localities, began to accumulate a greater share of T&C employment (Arnold, 2007). This is an important consideration for this solution path because if external migrants occupy a significant share of T&C work, this will have consequences for how changes in T&C employment can be related to the health of Thai nationals. Moreover since Pangsapa's (2007) analysis does not cover the time period after the MFA phase-out, we must also consider how characteristics of the sector described thus far, might have changed since her analysis.

Despite the relocation of production facilities to border areas, evidence suggests that the majority of formal workers in the sector were Thai leading up to and immediately after the MFA phase-out. This evidence comes from researchers Goto and Endo (2014) who find that in 2006, 75.1% of formal T&C workers were employed in areas not associated with migrant labour, namely, Bangkok and its surrounding provinces. However, by the year 2010, this figure dropped to 56.6% due in part to employment loss in the greater Bangkok area, as well as to employment growth in border regions, particularly in the province of Tak (Goto & Endo, 2014). Tak is home to Mae Sot, a city which is well-documented for its use of migrant

labour from Myanmar (Kusakabe & Pearson, 2010, 2014). What this signals is that after the MFA phase-out, employment growth largely occurred in areas of Thailand characterized by migrant labour, and that in fact many Thai T&C workers in the greater Bangkok area experienced employment loss. However, it must be noted that these figures are based on formal registered workers, and while some migrant labour is accounted for in these official figures, unavailable are the numbers of both informal Thai and external migrant workers.

These changes have multiple implications for this solution path. To begin with, that many Thai T&C workers lost their employment represents a significant departure from the post MFA phase-out context in China, where workers were experiencing employment growth. For this reason we must consider whether such employment loss was significant enough to impact national health outcomes. Between 2006 and 2010, 12,964 or 6.1% of Thai workers in the greater Bangkok area lost their T&C employment (Goto & Endo, 2014). While a sizeable figure, it falls short of 15% benchmark used in the fsQCA analysis to qualitatively categorize a country as fully in the membership set of employment loss. Because it is unlikely this figure of employment loss can be significantly associated with changes in national health outcomes, we are in a predicament similar to the one we encountered in the case of China, whereby we were unable to relate changes in T&C employment directly to infant mortality rates. However, employment loss within the sector may have had other, wider ramifications on the sector, for instance by facilitating greater job insecurity amongst Thai T&C workers maintaining their positions.

Complicating matters further is the fact that the sector did, overall, experience employment growth and while we also cannot relate this growth directly to changes in Thailand's infant mortality rates, (since it occurred in a population of workers whose children would not be accounted for in the examined health figures), as in the case of China, there may be indirect pathways infant health was implicated. Again, the EMCONET framework identifies levels of economic inequality and material deprivation as two areas that are important for health in the context of labour markets (Benach et al., 2007). According to World Bank data (World Bank, 2013), inequality largely decreased in Thailand after the MFA phase-out. In 2002, the country had a Gini coefficient of 42; in 2006 it increased slightly to 42.6 but by 2008 it had decreased to 40. This is contrasted with China, where the Gini coefficient

remained stable (World Bank, 2013). In 2004, the Thai T&C sector represented about 4% of the country's GDP (Pangsapa, 2007). While it would seem growth in the sector would have improved the state's spending capacity on factors that could have reduced population level material deprivation, Goto and Engo (2014) note that in fact the *value* of T&C exports peaked in 2005, and has been declining ever since.

Water and air pollution emerged as possible links between growth in the Chinese T&C sector and the worsening infant mortality rates. In the case of Thailand while some evidence suggests similar concerns (Greenpeace, 2011) less information was available on these factors.

There is a final complexity that must be taken into consideration in the case of Thailand. In late December 2004 a large Tsunami took the lives of 8,500 Thai people, which may in part explain improving mortality rates from 2005. However, there are a range of ways in which health may be impacted after a Tsunami, with some impacts lasting for weeks and months beyond the disaster (Johnson & Galea, 2009). For this reason more work is needed to consider how the Tsunami impacted mortality rates in Thailand, both in 2004 and beyond.

8.7.4 Summary

The aim of collecting evidence within this solution path was to explain the results of the fsQCA which relate T&C employment growth in non-highly developed countries to the worsening of infant mortality rates in the context of non-protective welfare state policies, regardless of protective labour market policies.

Working inductively backwards from available evidence, a potential causal mechanism begins to take shape which accounts for the worsening of infant mortality rates in China via an increase in T&C pollution after the MFA phase-out. However, much more work is needed to investigate this potential pathway to health, and it is unclear how likely pollution might have influenced infant mortality rates in other countries characterized by this solution path. Future analyses examining changes in the T&C sector should consider this question in greater depth.

Examining Thailand as a deviant case, adds little to the construction of a causal mechanism in relation to this solution path. However, process tracing in this case does highlight some interesting considerations about changes in the T&C sector after the MFA phase-out. To begin with, while T&C employment growth is noted to

characterize the post MFA phase-out context, this portrayal veils a more complex situation whereby many Thai nationals experienced employment loss and migrants from neighbouring countries such as Myanmar, experienced employment growth. Furthermore, while migrants are accounted for to some extent within national employment figures, unaccounted for is the likely growth in informal T&C employment, among both Thai nationals and external migrants. This finding is aligned with work undertaken in previous solution paths which finds an increase in precarious work after the MFA phase-out. It is also aligned with work undertaken in regards to the Kyrgyz Republic, which found that official employment figures masked interactions between the formal and informal market.

There are two main implications which follow from these considerations. First, while it is noted that it is difficult to relate employment loss among Thai nationals to infant mortality rates, more work is needed to understand the impacts of employment changes on migrant and informal workers. Second, as indicated previously, future work which investigates the health impact of T&C employment changes should better account for interactions between the formal and informal segments of the market.

8.8 Solution path 7: Sri Lanka, Bangladesh and Indonesia

8.8.1 Introduction

The seventh and final solution path relates less developed countries to the worsening of infant mortality rates in the context of protective labour market policies and employment growth, regardless of the protectiveness of welfare state policies. As can be seen in the below XY plot, Brazil, Bangladesh and Sri Lanka are all typical cases within this solution path. Sri Lanka and Bangladesh represents the most ideal typical cases and as such will be examined comparatively. Indonesia represents a case which is deviant in kind and thus suitable for comparative case work.

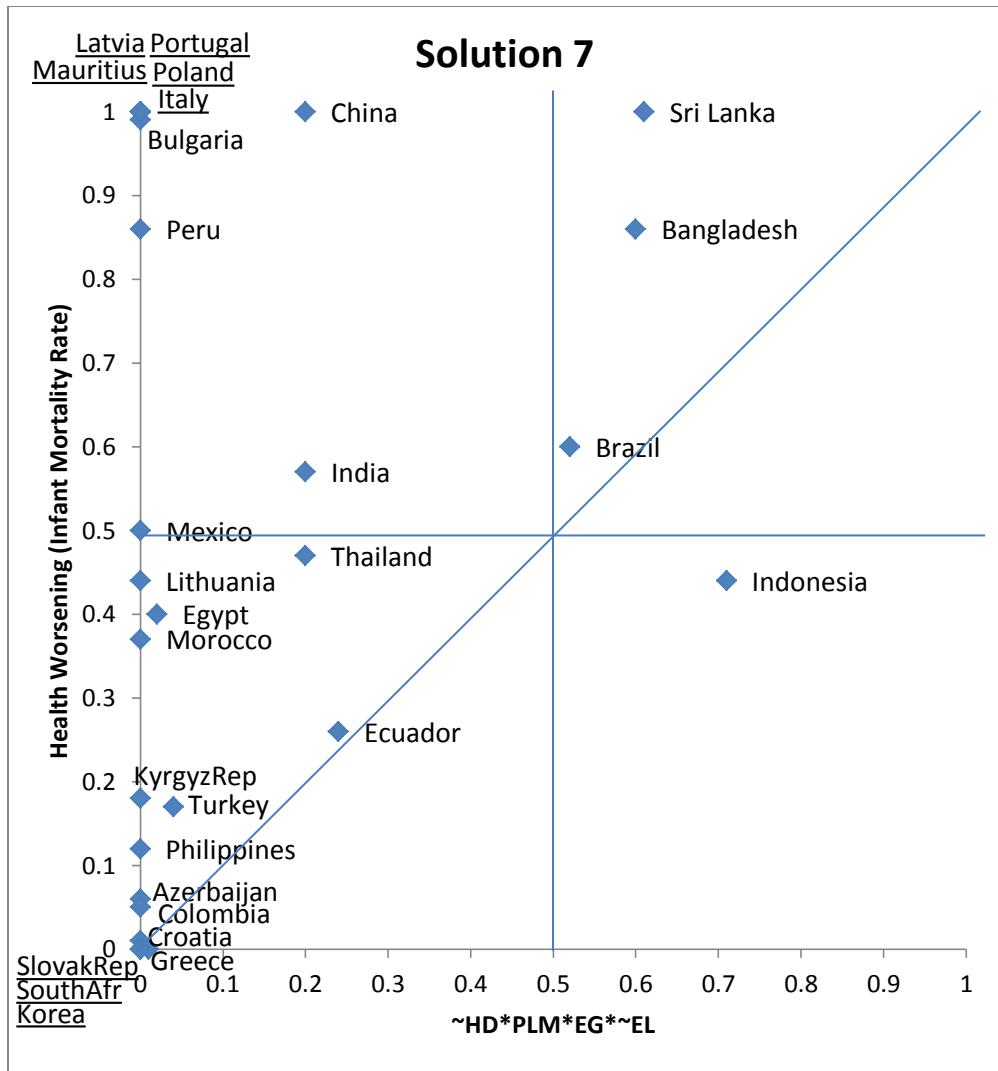


Figure 34 Solution Path 7 XY plot

8.8.2 Collection of Empirical Material and the Causal Mechanism

The three countries investigated within this solution path are represented by two different truth table rows in the fsQCA analysis. While Sri Lanka is characterized by both protective welfare state and labour market policies, Bangladesh and Indonesia are characterized by only protective labour market policies. However, while examining Bangladesh in relation to the third solution path it was questioned whether this was the correct characterization.

As with other solution paths, here the theory building process began with the collection of empirical material. The goal was first to build a narrative about Sri Lanka's T&C sector similar to what was undertaken in relation to other solution paths. This narrative was then compared with characterizations of the Bangladeshi T&C sector. Here evidence from the third solution path was drawn upon; however,

new material was also gathered in specific relation to Bangladesh and changing infant mortality rates. Next, the aim was to inductively work backwards in the search of a plausible causal mechanism that might help explain the solution's results. In terms of Indonesia, process tracing was specifically used to investigate what about the country is anomalous when compared to Sri Lanka and Bangladesh.

As with previous solutions, the results of these efforts need to be understood within the context of data sources and availability. Scholarly work has focused more on the social consequences of the Sri Lankan and Bangladeshi T&C sector than it has in relation to other countries studied in this thesis. However, the results presented here are not meant to provide an exhaustive account of this literature. Rather, the focus is on conditions which were interpreted as causally relevant with the EMCONET framework in mind. In regards to Indonesia, little scholarly work has focused on the characteristics of T&C workers and their employment conditions. However, literature on the country's social policies, along with scholarly work which focuses on the more economic aspects of the sector do provide some insights on how the country and its T&C sector is comparatively situated in reference to Bangladesh and Sri Lanka.

A range of areas within the EMCONET framework are considered in the context of this solution path: labour market regulations, welfare state policies, employment conditions, working conditions, economic inequality and material deprivation.

Literature surrounding the T&C sector in Sri Lanka indicates a range of similarities to the Bangladeshi sector; however, there are also important differences that must be taken into account. Overall, focusing on evidence in relation to the EMCONET framework fails to shed light on a precise mechanism linking changes in the T&C industry to the worsening of infant mortality rates in Sri Lanka and Bangladesh. Nonetheless, process tracing efforts undertaken in this solution path bring into greater focus important considerations for future work in this area.

Presentation of the results will focus first on the importance of the industry for the Sri Lankan economy. Similarities between the Sri Lanka's and Bangladesh's T&C sector will then be explored. Finally, what about Indonesia is anomalous when compared to these typical cases will be considered.

8.8.3 Findings

Sri Lanka and Bangladesh

As was the case with regards to the T&C sector in Bangladesh, it is also hard to overstate the importance of the T&C sector for the Sri Lankan economy and for women's employment in the country overall. In 2004, the sector is noted to have accounted for 48.8% of total export revenue (Kelegama, 2009), to have generated 9.5% of the country's GDP and employed 6% of the country's total labour force (Kelegama, 2009). In 2006, the apparel sector alone is estimated to have employed between 290,000 (Lopez-Acevedo & Robertson, 2012) and 383,000 (rounded, authors calculations of COMTRADE data) workers. Moreover, over 1 million people are estimated to be indirectly dependent on the sector (Lopez-Acevedo & Robertson, 2012).

There are other similarities between the Bangladeshi and Sri Lankan T&C sector. First, it is widely acknowledged that in both countries the sector is rooted in the MFA quota system (Kelegama, 2009; Lopez-Acevedo & Robertson, 2012). Moreover, as in Bangladesh, T&C work in Sri Lanka has historically been, and continues to be, carried out by a predominately female workforce. Figures place the share of female employment in the range of 73% to 90% (Atkinson, 2007; Jayaweera, 2003; Savchenko & Lopez-Acevedo, 2012). In both countries, female workers are also noted to remain in the sector for only a short period of time. This is for reasons related both to the sector's strenuous working conditions as well as to workers' marriage and childbearing decisions (Prasanna & Gowthaman, 2006). Finally, as in Bangladesh, the Sri Lankan T&C industry has brought many women the benefit of increased autonomy and independence while at the same time, exposing them to poor working conditions including low wages, long working hours, employment without contracts, high work intensity, verbal and physical abuse, and a suppression of union rights (Attanapola, 2004; Hancock, 2009; Lopez-Acevedo & Robertson, 2012; Lynch, 2007; Shaw, 2007).

The Sri Lankan T&C sector however, can be differentiated from Bangladesh's on at least four important accounts. First, while many of the sector's workers are internal migrants, leaving their rural villages for employment in the large urban-based free trade zones (FTZs) (namely in Colombo and its outlying areas), a significant proportion of Sri Lankan T&C workers are employed in production

facilities based in rural areas, in close proximity to their familial villages⁷. This unique feature of the sector has its roots in a national strategy called the 200 Garment Factory Programme. Created in 1992, this Programme sought to promote the industry while simultaneously combating both rural unemployment and the stigma attached to urban garment workers. Popular discourse in Sri Lankan society characterizes urban garment workers as a threat to the country's morality and national identify (Hewamanne, 2008; Lynch, 2007). Since villages are considered sources of 'pureness and virtuosity', it was believed this image could be improved (and namely, the industry promoted) by expanding the sector into rural localities.

This urban/rural dichotomy within the Sri Lanka T&C sector has important implications for pathways to health. One implication relates to workers' living conditions: women migrating to urban areas for T&C employment often live in dormitories, which, as in China, are noted for being overcrowded, unhygienic and unsafe (Attanapola, 2004; Shaw, 2007). In contrast to China however, these dormitories are owned and operated by individuals otherwise disassociated with the factories. Rural-based workers by contrast, often continue living with their families and so do not face these same accommodation problems. Research by Attanapola (2004) demonstrates that for Sri Lankan women migrating to larger cities for work in Free Trade Zones (FTZs), working and living conditions combine to contribute to a worsening of their health. Another study shows that a main reason for workers' dissatisfaction with FTZ work is the non-work environment (Shaw, 2007). Given the poor record of working conditions within factories, this finding is particularly revealing.

Another health implication of the sector's urban/rural dichotomy relates to working conditions as well as to broader community development considerations. Goger (2013) identifies the 200 Garment Factory Programme as a catalyst for improved working conditions in rural-based production facilities. This is because companies with production facilities in Sri Lanka's villages must display evidence of moral responsibility in order to be accepted into local communities. Firms have been highlighted for responding to this need by not only ensuring acceptable working conditions within the factories but also by contributing to the improvement of the

⁷ A precise figure on the distribution of employment across these rural and urban settings could not be found.

surrounding communities' schools and housing. Village based T&C factories have also been known to establish community centres and offer women's empowerment workshops in the areas where they are located (Goger, 2013). Such locally focused initiatives are something not typically taken on by FTZ-based factories.

This is not to say that all village-based factories have better working conditions than those based in FTZs. To be sure, many FTZ-based companies are under pressure to ensure that they are meeting the standards of their international buyers. Better working conditions are also a means of attracting and retaining workers in a country where the stigmatization of garment workers means high labour turnover and labour shortages. For reasons related to this later point, many Sri Lankan T&C factories are noted to provide workers with free or subsidized meals, transport, and health care services, even while other poor working conditions, as noted earlier, prevail. Moreover, T&C workers living at home may experience problems that those working in FTZ-based factories do not, such as domestic violence, conflicts over changing income-earning roles in households, and a higher degree of surveillance and patriarchal control (Goger, 2013). Another point to consider is that not all the community-based investments that rural factory owners pursue will be inherently good for workers or their communities. For example, as Groger (2013) notes, such initiatives may serve to reinforce various forms of patriarchal control.

Overall, it suffices to say that pathways to health in relation to the Sri Lankan T&C sector will differ across the location of production facilities both in terms of workers' living and working conditions.

Sri Lanka is also differentiated from Bangladesh on the basis that there is at least some evidence that its labour market and welfare state protections are marginally better. In fact the Asian Development Bank (2012) considers labour regulations in Sri Lanka to be relatively higher than those in most South Asian countries. At least three examples can be provided towards evidencing this claim.

To begin with, up until 2010, Sri Lanka was the only Asian country to benefit from the Generalized System of Preferences Plus (GSP+), a trade exception established in 2005 which extends preferential access to European markets for developing countries which have effectively implemented a series of 27 core

international conventions related to human rights, labour rights, the environment, narcotics and corruption (Yap, 2013). However, in 2010, these benefits were revoked from Sri Lanka for human right abuses committed by the government during the country's civil war (Yap, 2013).

Second, Sri Lanka's 'Garments Without Guilt' campaign, while extremely rudimentary and limited in its scope, seems to evidence a national commitment to labour market protections that has not surfaced in relation to other Asian countries that this thesis has investigated. This campaign, launched by the government and a collection of industry associations in 2006, seeks to portray Sri Lanka as an ethical source of T&C products. In doing so, it has created a certification system which is guided by 5 principles. These principles aim for T&C working conditions to be ethical and free of child labour, forced labour, discrimination on any grounds and sweatshop practices. Compliance with the campaign is independently monitored by the Swiss-based group SGS (JAAF, n.d.).

Finally, Sri Lanka has in place a system of social security protections for T&C workers which are unmatched in countries characterized as lacking protective welfare state policies. The Employees' Provident Fund (EPF) and the Employees' Trust Fund (ETF) form the main structure of social protections for Sri Lankan workers in the private sector (ADB 2012a). The EPF requires a minimum contribution equal to 20% of the employee's gross earnings. The employer is responsible for 12% of this contribution and the employee 8%. Employees are able to withdraw their balances upon reaching retirement age (55 for males, 50 for females), or upon retiring after marriage (for females only). Benefits can also be claimed on medical grounds, for reasons related to migration, or upon death of the employee (Asian Development Bank, 2012b).

The ETF requires employers to make contributions equal to 3% of an employee's total monthly earnings (Asian Development Bank, 2012b). These contributions are not to be deducted from the employee's wage. Through this Fund, employees receive death benefits, disability benefits, financial assistance for heart and eye surgeries, and financial scholarships for their children. Moreover, employees can claim the balance of the fund (with interest and dividends) when they retire, resign, or depart from their post without resignation. They can also claim these funds

when their employer ceases operations, or when they are dismissed from employment (Asian Development Bank, 2012b).

Of course, none of these examples of protective labour market and welfare policies are without their weaknesses. For instance, it is reported that many workers were denied severance pay following T&C factory closures in the immediate aftermath after the MFA phase-out (Atkinson, 2007). Some companies were also found to have defaulted on their payments towards the Employees' Provident Fund (Sivananthiran, n.d.in Arunatilake, 2013). Moreover, the scope of the Garments Without Guilt campaign is noted to be extremely limited. In 2010, only 20% of Sri Lanka's T&C production facilities were certified, a figure that appears to be decreasing with increasing competitive pressures (Goger, 2013). The country also has an extremely poor record with regards to allowing workers to freely organize (Atkinson, 2007), despite having ratified ILO conventions which protect workers' right to collective bargaining and freedom of association.

A third difference between Bangladesh and Sri Lanka relates to the type of female undertaking T&C work. While in Bangladesh married women with children represent a growing demographic among T&C workers (Kabeer, 2004), evidence suggests that in Sri Lanka workers remain mostly young, unmarried, and childless (Prasanna & Gowthaman, 2006; Shaw, 2007). This has important implications for the ways in which we can process trace potential pathways to infant mortality in both countries. In Sri Lanka the focus must be on indirect pathways since the large majority of T&C workers are not having children. However, in Bangladesh, in addition to indirect pathways, changes in infant mortality rates may be significantly impacted via direct pathways since a larger proportion of T&C workers are noted to be having children (between 40-50%) (Kabeer, 2004).

The final difference between the two countries relates to the employment changes in the T&C sector following the MFA phase-out. In Bangladesh, process tracing confirmed that employment in the sector continued to grow following the phase-out. In Sri Lanka however, evidence is less conclusive.

World Bank authors Lopez-Acevedo and Robertson (2012) draw on figures which demonstrate a reduction in T&C employment after the MFA phase-out. However, there are at least three important weaknesses in these figures. The first is

that they are drawn from multiple sources with different estimation procedures: some figures are drawn for example from industry estimations whereas others are drawn from survey results. Second, the industry sources cited do not reference where their figures are obtained from. For example, an article (Barrie, 2009) is cited from the industry website, Just Style. The article, published in 2009, notes that 270,000 are employed in the T&C sector; however, neither a year nor source for this figure is provided. Finally, the figures provided in the World Bank report are noted to account only for apparel employment, not textile. This seems strange especially since some of the sources they cite seem to account for both, such as the aforementioned article posted on Just Style. While textile employment is less prevalent in Sri Lanka than that of apparel, it nonetheless represents an important source of work in the industry. Data from INDSTAT demonstrates that in 2008, almost 13% of those employed in the Sri Lankan T&C industry were employed in the textile sector (author's calculations based on INDSTAT data).

Contradicting the claim that employment decreased after the MFA phase-out are embassy cables released by Wikileaks, as well as data from INDSTAT (which was used to calculate T&C employment changes for the fsQCA analysis). Embassy cables from Sri Lanka to the office of the United State Trade Representative in 2006 and 2007 report some initial T&C employment loss after the phase-out of quotas (Wikileaks, 2006a, 2006c, 2007a). However, redundant workers are noted to have been reabsorbed back into the industry. In the cables, evidence of this is offered via reference to labour shortages in T&C facilities. Moreover, a released embassy cable from 2008 which discusses the status of the industry does not point to employment losses since the phase-out, although neither does it point to employment growth (Wikileaks, 2008).

Data from INDSTAT, as used in the fsQCA analysis, exhibits a positive change in employment in the pre- versus post-MFA phase-out period. This data is collected from the Sri Lankan Department of Census and Statistics. However, because of missing values the pre- phase-out employment figure used in the analysis is from 2001 (instead of the ideal pre-phase-out year of 2004). In 2001, 212,668 workers are noted to have been employed in the sector. In 2006, 580,003 workers are noted to have been employed in the sector. However, it could be the case that employment grew substantially between 2001 and 2004, only to decrease in 2005

following the phase-out. In fact, between 2006 and 2008 we see a downward trend from 580,003 workers in 2006 to 499,351 workers in 2007 and 383,882 workers in 2008 (author's calculations from INDSTAT data). Therefore, INDSTAT data provides little assistance in confirming the direction of employment change after the MFA phase-out in Sri Lanka.

Despite these problematic employment figures, understanding the situation for workers following the MFA phase-out seems at least somewhat reconcilable. A major employment survey carried out by OXFAM immediately prior to and following the MFA-phase out records initial employment loss after the MFA phase-out (Atkinson, 2007). This survey forms part of the data that the World Bank authors use to paint an overall picture of employment loss. However, employment loss is noted to mostly have occurred in small, more rural-based factories. While it is likely that some workers losing employment in rural-based facilities were reabsorbed into urban-based factories, because T&C work in urban areas is highly stigmatized (Hewamanne, 2008; Lynch, 2007) it is likely such transfers would have been limited. In other words, we are at least able to deduce that following the MFA phase-out, Sri Lankan workers in rural-based production facilities were more likely to face employment loss than their urban based counter-parts. While some losing employment may have been reemployed in urban factories, it is unlikely all those losing their employment were reabsorbed. Therefore, without knowing whether on the whole T&C employment increased or decreased after the phase-out, we can at least safely presume that in general, many workers in rural based factories experienced employment loss, while others were likely to either be re-employed or employed for the first time in urban-based factories.

What are the implications of the above considerations for this solution path? In the case of Bangladesh, we can envision how employment growth may have been directly health promoting for IMR, namely through increased household resources. However, as discussed in Solution 3, the tedious conditions under which women work, and their own poor health status, could present problems for the prenatal environment as well as for infants' health after birth, if the mother must resume work soon after giving birth. In terms of indirect pathways, again, the EMCONET framework highlights the importance of economic inequality and material deprivation. Of the data available from the World Bank we find that the Gini

coefficient in Bangladesh decreased (i.e. inequality decreased) faster in the 5 years following the MFA phase-out than the 5 years preceding it. In 2000, the Gini coefficient was 33.5, compared to 33.2 in 2005 and 32.1 in 2010 (World Bank, 2013). While some of this reduction may be related to employment growth in the T&C sector, overall the change is small and inequality remains high. Moreover, with substantial changes in economic inequality we would expect improvement in infant mortality rates (Wilkinson & Pickett, 2010).

In terms of social expenditure aimed at relieving material deprivation, Bangladesh spends less than 2% of its GDP on social protection (Asian Development Bank, 2012a). Moreover, social protection programs in Bangladesh fail to efficiently target the poor and are instead directed towards the non-poor (Asian Development Bank, 2012a). For these reasons, it would be difficult to relate changes in material deprivation via social spending to changes in national infant mortality rates, whether or not this spending capacity increased as a result of industry growth.

In the case of Sri Lanka, it is unproblematic that we do not know the overall trend of employment changes when trying to understand pathways to IMR. This follows from two considerations. First, since few Sri Lankan women working in the T&C sector are having children, employment change in either direction would have presumably had little *direct* impact on national infant mortality rates. Second, while evidence doesn't agree on the employment impact of the phase-out, it is agreed that the industry overall grew after quotas were removed (Lopez-Acevedo & Robertson, 2012). For this reason, we can consider whether overall growth within the industry *indirectly* influenced infant mortality rates. Compared with Bangladesh, economic inequality is higher in Sri Lanka though over the same 10 year period decreased faster. World Bank data indicates a Gini coefficient of 41.1 in Sri Lanka in 2000, 40.3 in 2007, and 36.4 in 2010 (World Bank, 2013). Without data for other years however, it is unclear how these decreases are positioned in relation to the MFA phase-out. Moreover, we would expect improvements in infant mortality rates with substantial changes in economic inequality, not the worsening of rates as is seen in the case in Sri Lanka. In terms of social expenditure, Sri Lanka spends 3.2% of its GDP on social protection (Asian Development Bank, 2012b). While this is relatively high in comparison to other low- and middle-income Asian countries, the social

protection programs in Sri Lanka, as in Bangladesh, are noted to be ineffective at reaching the poor (Asian Development Bank, 2012b).

A final consideration to take into account is, as discussed in the case of Thailand, on December 26, 2004 a large Tsunami struck Southeast Asia. As a result, an estimated 31,000 -37,000 lives were lost in Sri Lanka (UNEP, 2005). The circumstantial risk factors surrounding this disaster, which may differ across nations, may in part explain worsening infant mortality rates from 2005 (Johnson & Galea, 2009).

In sum, a causal mechanism for this solution path appears to point to considerations beyond those contained with the EMCONET framework. This finding mirrors the results found in regards to other solution paths concerned with changes in infant mortality rates. While process tracing efforts in the cases of the Kyrgyz Republic and China revealed other potential pathways to health, (poverty reduction in the case of the Kyrgyz Republic and industrial pollution in the case of China), this was not the case in regards to this solution path.

However, in Bangladesh, high levels of arsenic in drinking water have been identified as a significant source of health problems by the World Health Organization as well as related to industrial output (WHO, 2014). More work is needed however, to understand these potential pathways in both countries.

Indonesia

As mentioned above, the search for evidence in the case of Indonesia proceeded with a slightly different aim than it did for Bangladesh and Sri Lanka. Across the latter cases, it is hard to reconcile changes in the T&C sector with the countries' worsening infant mortality rates after the MFA phase-out. The search for evidence in the case of Indonesia sought to identify whether something about the country is comparatively anomalous.

As in Sri Lanka and Bangladesh, the T&C sector in Indonesia is rooted in the MFA quota system (Hassler, 2004; Vickers, 2012) and characterized by a predominately female workforce: estimates place the share of females working in the sector between 50 (Robertson, Brown, Pierre, & Sanchez-Puerta, 2009) and 78 percent (ILO, 2012a). T&C companies are mostly centred in Java, particularly in Jakarta and its outlying areas, as well as in Bandung, West Java's capital

(Ferenschlild & Wick, 2004; Vickers, 2012). Female workers are reported to come from largely rural, and agricultural based livelihoods, and there is some evidence of dormitory-based accommodation (Vickers, 2012). There is also some evidence that Indonesian T&C workers are mothers (Ferenschlild & Wick, 2004). Moreover, as in Bangladesh, there is evidence of a large informal market within the T&C sector (Vickers, 2012).

In comparison to Bangladesh and Sri Lanka, there is less scholarly work focused on the working conditions of Indonesian T&C workers; however, there is some evidence which suggests that working conditions are quite poor and characterized by long working hours, low wages, sexual harassment, violations of health standards and a suppression of union activities (Ferenschlild & Wick, 2004).

After the MFA phase-out, Indonesian T&C export values are reported to have increased (Thee, 2009; Vickers, 2012), however, additional information on the employment impacts of the phase-out could not be found. There is evidence that some employment loss (20,000 jobs) occurred immediately after the phase-out (Chongbo Wu, 2007), although it is unclear whether workers losing their work would have been reabsorbed back into the market. Relatedly, it is unclear what type of employment alternatives Indonesian T&C workers have, if any.

Despite the limited data on the T&C workforce in Indonesia, there are three main ways in which the country's T&C sector can be distinguished from the typical cases explored in this solution path. A main difference relates to the protectiveness of the countries' welfare state policies. An argument was made above that Sri Lanka's welfare state polices are marginally more protective than Bangladesh's. Indonesia's welfare state policies can also be described as more protective than Bangladesh's, but they are perhaps not as protective as Sri Lanka's. This notion is supported by work undertaken by the Asian Development Bank (2013) which analyses data on social protection programs in 35 countries in Asia and the Pacific. On the basis of this analysis a social protection index (SPI) is developed which is essentially a ratio of countries' social protection expenditures to their intended beneficiaries. This ratio is compared with 'poverty-line expenditures' so that if a country has a SPI of 0.100, this would indicate "that total social protection expenditures (per intended

beneficiary) represent 10% of poverty-line expenditures” (p. xi)⁸. Therefore, a higher index number indicates better performance. In this work Bangladesh is given a score of 0.043, Indonesia a score of 0.044 and Sri Lanka a score of 0.121.

In terms of social policies which have specific relevance to T&C workers, Indonesia also seems to rank somewhere between Bangladesh and Sri Lanka. For instance, in terms of retirement funds, Sri Lankan employers and employees together contribute 20% of a worker’s salary (12% is contributed by the employer and 8% by the employee). In Indonesia, employers are required to contribute 5.7% of a worker’s wage and employees are not required to contribute anything. While Sri Lankan female T&C workers have access to their fund upon retiring for marriage, on medical grounds, for reasons related to migration, or upon death of the employee (ADB, 2012a), in Indonesia, accumulated funds can be claimed before retirement in cases of death, permanent total disability, permanent migration overseas, when becoming a police officer, when joining the armed forces, or in the event of involuntary unemployment. However, in the latter case the worker to is required to have been participating in the scheme for at least 5 years and must submit to a 1 month waiting period. There are no comparable policies in Bangladesh (ADB, 2012b).

That Sri Lankan T&C workers have access to funds after marriage seems especially valuable since workers often leave the sector for marriage purposes. It also seems particularly valuable that Indonesian workers are able to access benefits in the case of involuntary unemployment. However, it is not clear whether the 5 year working requirement is especially accessible to the demographic of T&C workers in this country, particularly so given the large share of informal workers. Sri Lankan employees also have access to funds in the case of unemployment, involuntary or otherwise: recall from above that the Sri Lankan Employees’ Trust Fund requires employers to make contributions equal to 3% of an employee’s total monthly earnings and that the value of this fund can be claimed by employees when they retire, resign, or depart from their post without resignation. They can also claim these funds when their employer ceases operations, or when they are dismissed from employment (ADB, 2012a).

⁸ Countries’ poverty-line expenditures represent one-quarter of their GDP per capita (Asian Development Bank, 2013)

Based on the countries' distribution across different rows of the fsQCA truth table, the differences in welfare state policies between countries is somewhat expected: recall that while Sri Lanka is characterized as having protective welfare state policies in the fsQCA analysis, Indonesia and Bangladesh are not.

In terms of labour market policies, the fsQCA analysis characterizes all three countries as protective. Process tracing efforts in the third solution path however, revealed a dearth of labour market protections in Bangladesh, owing largely to the failed implementation of mandated policies. In Sri Lanka, weaknesses are also noted in the implementation of protective labour market policies, especially in the aftermath of the MFA phase-out, but perhaps to a lesser degree than in Bangladesh. In Indonesia, the implementation of protective labour market policies seems to be achieved in a way that is superior to implementation efforts in both Bangladesh and Sri Lanka. However, as will be described below, weaknesses exist in other policy areas and better implementation hasn't necessarily lead to an improvement in workers' employment conditions. This finding represents the second way Indonesia can be distinguished from the typical cases of this solution path.

For example, all three countries have relatively similar labour market regulations on severance pay, a key aspect of employment protection regulation (ILO, 2014a). Given the findings of solution path 3 it is doubtful whether such regulations are adhered to in Bangladesh within any reasonable respect, outside of the small population of foreign-owned factories within EPZs. Moreover, as noted earlier, after the MFA phase-out many Sri Lankans were left jobless without severance pay. In Indonesia, despite some factory closures after the MFA phase-out, employers' failure to abide by severance pay regulations is not something which emerged from the literature. While this may be the result of a smaller literature on the Indonesian T&C workforce, existing literature points to another possible reason why this outcome is observed.

In 1998, the emergence of democratic rule is noted to have led to significant changes in Indonesian labour market policies and their implementation (Lake, 2008). In this transformation, an overall pro-employer labour market position is noted to have given way to stronger worker rights. T&C companies are reported to have responded specifically to a shift towards stronger severance pay regulations by exchanging permanent employees for a greater number of contract workers, to whom

the regulations on severance pay do not apply (Lake, 2008). While this seems to represent greater adherence to labour regulations, it also represents deterioration in workers' employment conditions since contract workers face greater job insecurity and decreased access to social provisions. Moreover, in making this move, T&C companies are noted to evade a different aspect of labour regulation; namely one which precludes the long term employment of contract workers (Lake, 2008).

Indonesian T&C companies deploy a similar tactic in response to minimum wage laws, which are decentralized to local authorities. Without betraying local regulations on workers' minimum pay, companies instead relocate to localities with lower wages (Lake, 2008).

Scholars relate these pro-worker regulations on severance pay and minimum wages to the strength of unions in Indonesia (James, Ray, & Minor, 2003). That Indonesian unions are characterized as having an active role in shaping regulation is the third way in which Indonesia may be distinguished from Bangladesh and Sri Lanka, since labour unions in these countries are best characterized as suppressed. However, the ways in which T&C companies have responded to protective labour market policies suggests that unions in the Indonesian T&C sector may be weakening. This is because workers on temporary contracts may find it harder to organize. Moreover the threat of relocation may curb workers' desire to collectively organize. Rasiah (2012) notes that after the MFA phase-out, increased competitive pressures weakened Indonesian unions. Therefore, whether active unions is an enduring feature of T&C labour in Indonesia or one which was short-lived after the country's shift to democracy, is something that needs to be further investigated.

8.8.4 Summary

Recall that this solution path relates non-high-income countries to the worsening of infant mortality rates in the context of protective labour market policies and employment growth, regardless of the protectiveness of welfare state policies. Working inductively backwards from available evidence however, changes in the T&C sector do not seem related to changes in Bangladesh's and Sri Lanka's infant mortality rates. Moreover, examining Indonesia as a deviant case adds little to these findings.

Results from this case-study work however, do allow for some reflection on the fsQCA analysis and its characterizations of countries' labour market and welfare state policies. As previously noted the fsQCA analysis characterizes Bangladesh and Indonesia as having protective labour market but not protective welfare state policies. It characterizes Sri Lanka as having both protective labour market and welfare state policies. As noted in relation to other solution paths, it is difficult to relate the case study findings back to countries' overall labour market and welfare state characterizations since these findings are focused on T&C workers; however, in this case it is also difficult to answer how these considerations should be taken into account in future cross case analyses.

It has already been noted that T&C workers in Bangladesh are characterized by neither protective labour market nor welfare state policies. However, in terms of Indonesia and Sri Lanka, how labour market and welfare state policies should be characterized in relation to T&C workers is perhaps less clear than in other cases. This is because there appears to be something qualitatively different about T&C workers in Sri Lanka and Indonesia than in many of the other countries investigated thus far, even in regards to more highly developed countries, with the possible exception of Portugal. For example, in both Sri Lanka and Indonesia, T&C employers (and T&C employees in the case of Sri Lanka) are required to contribute to workers' retirement funds. Moreover these funds are available to workers for reasons related to voluntary or involuntary unemployment. These types of policies were not uncovered in relation to other countries, except in Portugal where older workers were noted to have the option of early retirement.

Additionally, in Sri Lanka, the government is pursuing a national marketing strategy to portray the country as an ethical supplier of T&C goods. In Indonesia, workers' unions are noted for having an active role in shaping labour market and social policies. For these reasons, T&C workers in Sri Lanka and Indonesia seem less hidden than in other investigated countries (although a large informal market is noted to operate in Indonesia). However, in both countries the genuine social protection offered by these considerations is questioned. This relates both to noted weaknesses in implementation, as well as to competitive pressures which are highlighted for diminishing the impact of potentially health protective pathways. For example, competitive pressures are noted to reduce the impact of Sri Lanka's ethical garment

production campaign. In Indonesia, T&C companies respond to competitive pressures by circumventing more (costly) protective policies and in doing so, increase the precariousness of employment in the sector. Further work is needed to investigate how these types of considerations should be taken into account in future analyses.

CHAPTER 9 DISCUSSION

9.1 Introduction

This chapter will critically discuss the results of the in-depth case study work. Recall that the aim of undertaking this case work was to provide a potential causal account of the cross-case patterns achieved in the fsQCA analysis. The fsQCA analysis identified seven solution paths as sufficient for changing mortality rates after the MFA phase-out. Twelve countries were selected for in-depth case work based on Schneider and Rohlfing's (2013) systematic procedure for choosing cases after a fsQCA. Theory-building process tracing was used in an attempt to construct potential causal mechanisms for each of these seven solution paths. This was guided by the EMCONET framework (Benach et al., 2007) which outlines pathways to health in the context of labour markets.

This chapter will begin with a summary of the process tracing results to indicate the type of plausible causal mechanisms which emerged from this work. It will then move to critically consider the tentative nature of these results and other limitations of the process tracing efforts. Next, the chapter will consider the process tracing results in relation to broader considerations of the health impact of the MFA phase-out and the relationship between trade liberalization and health more generally. Finally, the chapter will conclude with some thoughts on how combining process tracing with fsQCA leaves us better positioned to further investigate the health impacts of the MFA-phase-out.

9.2 Summary of Causal Mechanisms

The fsQCA analysis identified seven solution paths as sufficient for changing mortality rates after the MFA phase-out. Three of these solution paths related to changing adult female mortality rates and four related to changing infant mortality rates. Across these seven solution paths, specific potential causal mechanisms relating changes in T&C employment after the MFA phase-out to health emerged for only two.

Brazil was investigated in the first solution path, which related employment growth in conjunction with protective labour market and welfare state policies, to an improvement in adult female mortality rates. Unfortunately, process tracing in this solution path did not lead to the construction of a potential causal mechanism. This is

because it was found that a conditional cash transfer programme ('Bolsa Familia') was introduced in Brazil in 2003, which was likely to have influenced positively on adult female mortality rates after the phase-out in 2005. By 2006, this programme covered 11 million household, and has since been noted for its role in reducing poverty and inequality (Sánchez-Ancochea & Mattei, 2011). In public health literature it has also been associated with reductions in childhood mortality (Rasella et al., 2013).

In the second solution path, four countries were investigated: Italy, the Slovak Republic and Korea were investigated as typical cases, and Portugal was explored as a deviant case. The fsQCA solution characterizing these countries was at first glance puzzling. This is because it related decreases in T&C employment in highly developed countries to a worsening of adult female mortality rates, regardless of the presence or absence of protective labour market and welfare state policies. This was puzzling since we might expect protective policies to act as a buffer to the potentially negative impacts of employment loss.

Process tracing efforts however, were able to uncover a potential causal mechanism that might explain these results. Across the typical cases investigated, evidence was found which suggests that regardless of whether a country could be characterized by protective welfare state or labour market policies, T&C workers losing their employment after the MFA phase-out would have had little access to social protection. It was also found that T&C workers in these countries would have had few alternative employment opportunities.

As a deviant case, Portugal by contrast did not experience a worsening of adult female mortality rates. Despite being a member of the solution term, here evidence was found which suggests that Portuguese T&C workers had greater access to social protection after the MFA phase-out, given that their work was likely to be characterized by a more standard, full-time employment relationship. In addition to unemployment insurance, the evidence suggests that Portuguese T&C workers losing their employment would have been covered by the country's collective dismissal regulations. These regulations require employers to give workers advance notice of dismissals and time off to look for alternative work. Workers are also entitled to a minimum severance pay and possible re-training opportunities or early retirement.

The third solution path was characterized by only one country: Bangladesh. This solution path described a sufficient relationship between the worsening of adult female mortality rates and employment growth in less developed countries with protective labour market (but not welfare state) policies. Process tracing efforts undertaken in regards to this solution found that the T&C sector in Bangladesh is characterized by a range of complex and often contradictory processes in terms of how it impacts the lives of its largely female workforce. This relates primarily to the type of firms within which women work and the different spheres of women's lives which are impacted, sometimes negatively, sometimes positively, by work in the sector. Because evidence suggested that Bangladeshi T&C workers have little access to social protection and that employment growth after the MFA phase-out took place in firms with poor working conditions, ultimately a potential causal mechanism emerges which directs attention to these conditions.

The final four solution paths relate to changes in infant mortality rates. Process tracing efforts across these different solution paths however, were unable to uncover any specific potential causal mechanisms linking changes in health to T&C employment changes after the MFA phase-out. In some cases this related to a dearth of evidence on whether T&C workers were having children. In other cases, such as in regards to Thailand and Sri Lanka, there was uncertainty about the health impact of a large Tsunami which struck some of the analysed countries in late December 2004, just prior to the MFA phase-out. Pathways related to national levels of economic inequality and material deprivation were also explored in relation to infant mortality rates, but tying these issues to changes in the T&C sector proved difficult. In relation to the Kyrgyz Republic, a causal mechanism began to emerge which accounts for an improvement in infant mortality rates via wider macroeconomic changes, unrelated to the T&C sector. In China, a potential causal mechanism began to take shape which attributes the worsening of infant mortality rates to an increase in T&C pollution after the MFA phase-out. However, much more work is needed to investigate this potential pathway to health, and it is unclear how likely pollution may be influencing infant mortality rates in other countries characterized by the same combinations of causal conditions.

. Overall, it is found that in highly developed countries which experienced employment loss after the MFA phase-out, the worsening of adult female mortality

rates seems to be related to T&C workers' inability to access social protections as well as few alternative work opportunities. In less developed countries which experienced T&C employment growth after the MFA phase-out, it is found that the worsening of adult female mortality rates seems to be related to an absence of social protection policies, in combination with poor working conditions which were likely to have worsened after the removal of T&C quotas. The next section of this chapter will look at the reasons why these results themselves are limited and in some ways quite tentative. However, despite the provisional nature of these results, it is worth stressing that they do point to the importance of social protection policies in determining the health impacts of trade liberalizing processes.

9.3 Limitations of Results:

9.3.1 Data Availability

A major factor which limited process tracing efforts was data availability. This not only hampered the construction of causal mechanisms across the majority of solution paths as discussed above, but also renders the two potential causal mechanisms which emerged out of this work rather tentative.

For example, the potential causal mechanism which emerged in relation to Italy, the Slovak Republic, Korea, and Portugal rests heavily on a small literature base which was far more focused on matters related to economic growth and firm efficiency rather than social conditions. While care was taken in drawing inferences from this literature, the preliminary nature of this causal mechanism needs to be emphasized.

The second causal mechanism was constructed with evidence gathered in relation to Bangladesh. In contrast to the previous causal mechanism, much more scholarly work has been carried out relation to the Bangladeshi T&C sector, especially in the context of its social consequences. However, data was still limited in specific relation to the MFA phase-out. For this reason, the preliminary nature of this causal mechanism must also be emphasized.

9.3.2 Precision of Causal Mechanisms

Another limitation of the potential causal mechanisms is how far they go in specifying precise pathways to health. In relation to developed countries, the first potential causal mechanism emphasises the health importance of social protection

policies related for example to collective dismissals, severance pay and unemployment insurance. However, it is not immediately clear how these conditions, or their absence, in turn, may be impacting health. The EMCONET framework identifies a range of different pathways which may characterize the pathways to health from these conditions for example material deprivation, health behaviours, physio-pathological changes and psychosocial factors. However, data on these conditions were not uncovered in this work. Therefore precise mechanisms to health remain unclear.

In relation to the second causal mechanism, working conditions in addition to social protection policies are emphasized. However again, this leaves a range of more precise processes unclear. That the sector is noted to sometimes impact positively on workers adds an additional level of complexity to this mechanism.

9.3.3 Generalizability of Causal Mechanisms

A final limitation of the process tracing results relates to their embeddedness within a larger cross-case analysis. A primary concern here is that while the causal mechanisms seem to explain (at least tentatively) some of the countries investigated in greater depth, these results are limited in explaining the situation of other countries characterized by similar solution paths of the fsQCA. This relates less to the inherent nature of combining fsQCA with process tracing efforts (which will be discussed in the next section) than to the process tracing results themselves. This is because the causal mechanisms which emerged were not associated with the original causal conditions of the fsQCA, but rather drew attention to the need for refinement in these conditions.

For example, in relation to the first causal mechanism, despite countries' characterizations of protective labour market or welfare state policies, T&C workers were found to have little access to social protection. This means that for the causal mechanism to be relevant to other countries characterized by the original solution path, we must know more about T&C workers' access to social provisions in these other countries. If however, the original conditions of the fsQCA were related more directly to the causal mechanism, we would have greater reason to believe they are relevant to these other countries. Consider for example, a hypothetical solution path which relates strong social protections to improved mortality rates. Suppose also that this solution path is characterized by 7 typical cases, but only 3 are investigated in-

depth to build a potential causal mechanism. If a causal mechanism were to emerge that showed how this social protection was health improving in these 3 cases, it would be easier to assume that this causal mechanism might be in place in the other 4 typical cases, given that we already know that these other typical cases have protective social policies. This stands in contrast to the first causal mechanism found in this work, since reference is made to conditions that we don't yet have information on for other typical cases.

In relation to Bangladesh and the second causal mechanism, the situation is slightly different. Here the causal mechanism refers to causal conditions that we do have information on in relation to other countries. In this causal mechanism, an absence of social protection policies is related to the worsening of adult female mortality rates, in addition to poor working conditions. While Bangladesh was characterized in the fsQCA as having protective labour market policies, this causal mechanism shows that Bangladesh is instead best characterized by neither protective labour market nor welfare state policies. This is a combination of conditions which characterizes China, India and Thailand in the fsQCA. These countries however, are not characterized by a sufficient relationship in the fsQCA, although if the analysis is re-run with Bangladesh re-categorized, a sufficient relationship may arise. In relation to the second causal mechanism then, the limitation is not that it is unclear whether the causal mechanism applies to other countries, but that the other countries to which it is likely to apply are not currently characterized by a sufficient relationship.

Despite these limitations, it is important to keep in mind that process tracing was undertaken with the objective of identifying plausible causal mechanisms that can be tested empirically in subsequent research. As the next section of this chapter will show, aside from aiding in the construction of two potential causal mechanisms, process tracing results also shed meaningful light on broader considerations related to the health impact of the MFA phase-out, and on the relationship between trade liberalization and health more generally. These are findings which can be taken into account in subsequent research. Moreover, the concluding section of this chapter will illustrate how combining fsQCA with process tracing has established a solid basis from which many of the challenges noted above can be overcome.

9.4 Broader Insights

Aside from aiding in the construction of two potential causal mechanisms, process tracing results also shed meaningful light on broader considerations related to the health impact of the MFA phase-out, and on the relationship between trade liberalization and health more generally.

First, aligned with previous comparative welfare state studies (Beckfield and Krieger, 2009), the results of this work seem to indicate the health importance of social protection. Two causal mechanisms emerged which suggest that the worsening of AFM is related to T&C workers' inability to access social protections. This is found to be the case in the context of both T&C employment growth (in less developed countries) and loss (in highly developed countries). Evidence collected in relation to the first solution path also points to the health importance of protective social policies despite the fact that a causal mechanism could not be constructed. Here we encounter evidence from Brazil where reductions in poverty, inequality and child mortality have been associated with an expansive conditional cash transfer programme implemented just two years prior to the phase-out.

In the context of the MFA phase-out, trade liberalization was found to increase competition within the sector via an intensification of price pressures. This competition in turn, impacted T&C labour markets both in terms of shifting employment and working conditions. Changes in employment were found to extend beyond strict gains or losses. In regards to the Kyrgyz Republic for instance, evidence suggests that T&C employment loss in the formal sector corresponded with employment growth in the informal sector. In regards to Thailand, evidence suggests that figures pointing to employment growth mask a greater reliance on migrant and informal labour, which has resulted in employment losses for many Thai nationals. Furthermore, both in countries experiencing employment growth (e.g. Bangladesh) and employment loss (e.g Italy), evidence was found for a worsening of T&C working conditions after the MFA phase-out.

Social protection policies were found to interact with these considerations, and in response to the employment and working conditions of the sector in general, in many health important ways. For example, factors such as the size of T&C firms, the types of labour contracts through which workers were employed, and the types of labour overall which characterize the sector (e.g. formal versus informal, legal versus

illegal), were found to determine T&C workers' access to protective labour market and welfare state policies. These employment and working conditions often in turn, relate back to countries' labour regulations and also respond to the competitive pressures of the sector. In other words, social protection policies can both moderate pathways to health in the context of labour markets and influence the type of health related pathways resulting from trade liberalizing policies. They can moderate pathways to health by influencing the type of social protection available to affected workers. They can influence the type of health related pathways resulting from trade liberalizing policies by shaping for example, the type of employment contracts through which T&C firms can hire workers. In the Slovak Republic for example, labour regulation policies allowed for more precarious forms of T&C employment. These forms of employment would have precluded T&C workers losing their employment from accessing social protection policies like unemployment insurance.

Overall, findings suggest that that social protection is often inaccessible to the type of workers who may be the most vulnerable to processes of liberalization, and that many workers are particularly vulnerable to processes of liberalization due to the structure of labour market and social protection policies. Perhaps surprisingly, this seems to be the case in both developed and less developed countries. In fact, social protection for T&C workers seems to be greater in some less developed than more developed countries. In Sri Lanka and Indonesia for instance, T&C employers (and T&C employees in the case of Sri Lanka) are required to contribute to workers' retirement funds. Moreover, these funds are available to workers for reasons related to voluntary or involuntary unemployment. This can be contrasted with T&C workers in Italy, who are often (when employed in firms of less than 15 employees), exempt from protective labour regulations and social policies in the case of employment loss.

9.5 Combining fsQCA with Process Tracing

Recall that the fsQCA was undertaken as an exploratory analysis and process tracing as a means to build potential causal mechanisms that could be tested in subsequent research. The chapter will now move to discuss how combining fsQCA with process tracing leaves us better positioned to further investigate the health impacts of the MFA phase-out. Chapter 10, the concluding chapter, will more

broadly consider how the results of this thesis leave us in terms of further investigating the health impacts of trade liberalization.

To begin with, process tracing results uncovered a range of considerations which, if accounted for, can improve the validity of future cross-case analyses concerned with the health impacts of the MFA phase-out. For example, the fsQCA undertaken in this work characterized countries in terms of the protectiveness of their overall labour market and welfare state policies. However, results of the case study work demonstrate that future investigations would be better off considering how well such policies align with the type of workers employed in the T&C sector. For example, while Italy was characterized as a country with protective labour market policies, Italian T&C workers had little access to any potentially protective provisions. This is because Italian labour regulations excluded precisely the type of firms where a majority of T&C workers were employed prior to the phase-out (those with fewer than 15 workers).

Process tracing results also indicate the importance of regulations related to collective dismissals, severance pay and unemployment benefits. Considerations of these regulations in future cross-case analyses may offer an alternative means of measuring the protectiveness of labour market policies in the context of the T&C sector. A valuable source of this information is the International Labour Organization's Employment Protection Legislation Database. This database outlines employment termination legislation for 95 countries, and includes information such as the type of establishments excluded from dismissal regulations and the conditions under which severance pay is mandated. Results indicate that future analyses should also consider that changes in employment extend beyond simple dichotomies of losses and gains.

Limiting the efforts of future analyses will be similar data availability issues which were encountered in the work of this thesis. However, by providing an in-depth account of causally relevant factors associated with the T&C sector, process tracing results do establish a basis for the MFA phase-out to be investigated in ways that can potentially avoid some of the complications encountered in this work, such as those noted in relation to Brazil and countries struck by the large tsunami in 2004. For example, a finding typical across all of the cases studied in-depth is that the T&C sector is highly regionalized within countries. Using health data disaggregated by

region may therefore provide further insight about the health impacts of the phase-out in ways which limit the confounding influence of other issues.

CHAPTER 10 OVERALL FINDINGS, CONTRIBUTIONS AND NEXT STEPS

10.1 Introduction

In this final chapter, the contributions this thesis makes to the literature are reviewed. The main results, strengths, and limitations of the thesis will be considered along with where we are left in terms of next steps. These considerations will illustrate that while the relationship between trade liberalization and health is indeed enormously complex, this thesis has made significant strides towards tempering this complexity and additionally provides strong footing for future advancements in this regard.

10.2 What are the Pathways Between Trade Liberalization and Health: Insights from the Literature Review

The contributions this thesis makes to the literature begin with the findings and analysis of the literature review. Over the years, several frameworks have been developed to synthesize the complex pathways between globalization and health (some discussed in this thesis are Woodward et al., 2001; Labonté and Torgerson, 2003; and Huynen et al., 2005). Together these frameworks identify a range of global processes that have important health consequences.

These broader frameworks also identify important aspects of globalization that shape the context within which trade liberalization is pursued, adopted and responded to. Overall however, they focus on a limited range of liberalizing pathways and fail to name specific mechanisms mediating the trade liberalization and health relationship. However, recent work in this area has begun to account for a wider range of liberalizing pathways, some by adopting a social determinants of health perspective. Frameworks devised by Labonté and colleagues (2007) and Blouin and colleagues (2009) are discussed in this thesis for pioneering work in this latter regard.

Thus far, few researchers have focused on the exclusive health impact of trade liberalization. Exceptions include Thow (2009), Rayner et al. (2007), Grown (2005) and Blouin and colleagues (2009). These frameworks are important given that much of the work which examines trade liberalization in conjunction with other global processes fails to distinguish between pathways which originate from globalizing

processes more generally and trade liberalization specifically.

To date however, only Blouin and colleagues (2009) offer a framework which seeks to expose the exclusive impact of trade liberalization on a variety of health outcomes. Thow (2009), Rayner et al. (2007) and Grown (2005) by contrast, are focused on specific health issues related to nutritional outcomes and reproductive health.

Leaving aside the more widely studied impacts of trade on access to medicines and health services, Blouin and colleagues (2009) identify four additional pathways through which trade liberalization can impact health: income, inequality, economic insecurity and unhealthy diets. One criticism that has been aimed at this work however, is that in discussing these pathways the authors have not considered the ways in which trade liberalization may impact positively on health (Paccaud, 2009). Moreover, the identified pathways seem under conceptualized. For example, labour markets and wage differentials are of primary concern in the income inequality pathway, although conceivably trade liberalization may impact income inequality through other domains like food prices and government spending. Additionally, while the important mediating role of social policies is emphasized by the authors, a consideration of the impacts of trade liberalization on government revenues, a pathway recognized elsewhere (Labonté & Schrecker, 2007), is also absent.

This thesis aimed to provide a more comprehensive picture of the links between trade liberalization and health by undertaking a narrative synthesis of literature which explicitly identifies the ways in which trade liberalization may impact health. With a particular focus on SDOH related pathways, this review identifies important aspects of globalization that shape the context within which trade liberalization is pursued and points to four main contexts through which liberalizing processes may impact health: (1) increased flows of goods and people; (2) agricultural and food trade (3) structural adjustment programs⁹ and Poverty Reduction Strategy Papers¹⁰ and (4) labour markets. In these contexts, researchers identify a range of pathways between trade liberalization and health.

For example, in the context of increased flows of goods and people, trade

⁹ Structural Adjustment Programs are loan conditionalities imposed by either the IMF or World Bank.

¹⁰ Poverty Reduction Strategy Papers emerged in 1999 as a new requirement for countries to receive grants or loans from the IMF or World Bank.

liberalization is associated with increases in communicable and non-communicable diseases by increasing people's exposure to infectious diseases and hazardous goods, respectively. Additionally, a range of health outcomes is seen to result from an increased flow of drugs, legal and illegal, due mostly to import liberalizing strategies. In the context of agricultural and food trade, a variety of liberalizing processes link trade liberalization to health, particularly in reference to food security, nutrition, and food safety. In the context of SAPs, trade liberalization is viewed as a significant factor mediating related pathways to health. For example, reductions in consumption subsidies, a prominent component of SAPs, are noted for their negative impact on nutrition and household income. Finally, in the context of labour markets, trade liberalization is seen to impact health through a number of pathways related to various employment and working conditions as well as economic and social inequalities.

This literature review represents the first attempt at delineating the health impacts of trade liberalization through a systematic narrative synthesis. While this takes us some way towards answering the first research question of this thesis (i.e what are the pathways and mechanisms mediating the trade liberalization and health relationship?), two main weaknesses are that it offers 1) little in the way of empirical evidence and 2) little in respect to the broader objective of identifying how trade liberalization and social policy interact to influence health and its social determinants (RQ1). This first limitation relates to the fact that little empirical work has been undertaken by the studies identified by the review. The second limitation relates to the fact that included studies rarely acknowledge social policies as a health mediating factor, except in the context of labour markets. Moreover, due to other weaknesses in our understanding of the trade liberalization and health relationship, as will be discussed below, even in this context it is difficult to construct a clear conception of how social policies interact with liberalizing processes to influence health.

To begin with, this review finds that a dearth of *specific* liberalizing policies has been explored across the four contexts identified above, but particularly in relation to SAPs, PRSPs and labour markets. In these contexts, trade liberalization is often discussed in broad, imprecise ways with the exception of studies which consider for example, the health impact of reductions in consumption subsidies in the context of SAPs (Cheru, 2002; Labonté & Schrecker, 2006) and export processing zones (Corrigal et al. 2008; Muntaner et al., 2010) and reductions in export tariffs

(Grown, 2005) in the context of labour markets.

While one benefit of research synthesis is that it can identify such gaps in the literature, another is that it can facilitate the creation of a delimited number of frameworks from which to work. The value of which has been described by population health researcher Barbara Starfield (2001) and by Labonté and Torgerson (2003) in direct relation to trade and health work. Drawing on the various pathways identified in the literature review, as well as social epidemiological theories in general, this thesis presents an ‘adapted ecosocial framework’ (see section 3.5) which outlines the major features of the trade liberalization and health relationship as identified by studies included in the literature review. Ecosocial theory is used to frame these features since it is found both to account for authors’ conceptualizations of the relationship between trade liberalization and health and to provide a useful means of advancing areas thus far under conceptualized. For example, framing pathways to health in relation to ecosocial theory emphasizes that liberalizing processes may have lagged effects on health and need to be considered in relation to lifecourse theories of epidemiology. These two considerations are very much underdeveloped in work undertaken thus far.

By incorporating more theoretically advanced notions of how sociopolitical processes interact simultaneously across multi-levels, ecosocial theory can also free current trade liberalization and health theorizations from the shackles of the ‘distal-proximal divide’ (i.e. false assumptions that health is impacted in a linear fashion, through determinants whose causal strength is determined by their ‘nearness’ to the individuals or groups under consideration) (Krieger, 2008b). The adapted ecosocial framework also highlights the importance of trade liberalization’s impact on other areas thus far under explored including its impact on welfare states (e.g. via government revenues), governments’ policy space, and the physical environment.

The aim of this adapted ecosocial framework is not to lay claim to a grand theory but rather to present a tool for orienting deeper analyses into the relationships between trade liberalization and health. A main weakness of the framework is that it fails to clearly map out the processes and mechanisms linking the various elements contained within it. However, because the framework was developed on the basis of research still very much in its early stages, it is expected that as our knowledge about trade liberalization develops so too will our ability to capture more thoroughly the precise mechanisms and interactions at play.

It is also worth considering how critically engaging with the literature review leaves us better equipped to deal with some of the complexities characterizing the trade liberalization and health relationship and how in turn, these considerations represent important contributions to the literature.

Aside from identifying the pathways between trade liberalization and health, one of the main objectives of the literature review was to understand how researchers both conceptualize and define trade liberalization. Informing this question was the recognition that the ways in which trade liberalization are understood can both conceal and illuminate pathways important for health. Drawing on influential work by Lister (2004), this thesis regarded trade liberalizing concepts as the broad meanings lying behind liberalizing processes, for example ‘market integration’ or ‘free trade’, as well as the larger contexts within which authors perceived these processes as taking place, for example in reference to ‘globalization’ or ‘neoliberalism’. Definitions by contrast, were characterized as offering more specific explications of trade liberalizing processes, such as a reduction in import tariffs, or a reduction in consumption subsidies.

A major finding of the literature review was that researchers conceptualize trade liberalization in a variety of (sometimes conflicting) ways. For example, different authors vary in their identification of financial liberalization or foreign investment as a subset of a larger trade liberalization agenda. While many authors clearly position financial flows and foreign investment within conceptualizations of trade liberalization (Borghesi & Vercelli 2003; Doyal, 2002; Grown, 2005; Labonté & Torgerson, 2003; Muntaner et al., 2010; Polakoff, 2007; Smith & Signal, 2009; Woodward et al., 2001), others seem to position these concepts in separate domains (De Vogli & Birbeck, 2005; De Vogli et al., 2009).

Moreover, authors often conceptualize trade liberalization by referring to abstract ideas like ‘openness’, ‘free trade’ or by proxy of increased trade flows. Conceptualizing trade liberalization in these ways is problematic since the particular role of trade liberalization in these notions is unclear. For example, openness can broadly refer to deregulation policies or it can be used to indicate a country’s degree of integration with global economic forces. This latter notion of openness however, may depend on factors unrelated to trade liberalization, such as countries’ natural resource endowments (Subasat, 2008). Moreover, authors using trade flows as a proxy for trade liberalization confuse the processes of trade liberalization with its

presumed outcomes. This is especially problematic given the recognition that trade liberalization does not inevitably lead to increased trade flows (Rodrik, 1999; Rodriguez & Rodrik, 2000).

In synthesising researchers' different understandings of trade liberalization, this thesis underscores that trade liberalization is a multi-faceted concept shaped by the ideology of neoliberalism, characterized by unequal power relations, and promoted by powerful interests through a range of institutions, trade agreements and policies in the domains of goods, services and investment. This understanding of trade liberalization provides direction for mapping out a wide range of liberalizing processes and their combined impact on health. Moreover, by drawing attention to the political contexts and actors shaping the context within which liberalization policies are pursued, it also directs attention to how well the policy implications of research will be adopted.

This review also found that conceptualizations of trade liberalization are often presented without an explicit definition of what exactly the notion of trade liberalization entails. This is problematic for two reasons. First, explicit definitions of trade liberalization are needed for the obvious reason of making clear researchers' theorized pathways to health. Second, a common understanding of trade liberalization is especially needed if we want to comprehensively explore the health impact of trade liberalizing processes and draw more informed conclusions about their combined impact on health. The need for common definitions in health research is strongly advocated for by Starfield (2001).

To further consider the problem of defining trade liberalization, this thesis turned to development economics, a field in which debates about the merits of trade liberalization have been ongoing for decades. A brief review of this work finds that trade liberalization should be distinguished from notions of market integration and other overall measures of trade flows. Moreover, two considerations are found to be important in identifying an instance of trade liberalization. The first relates to recognizing that trade liberalization is a process. The second relates to understanding liberalization policies as a move toward a more lassiez-faire economic environment (i.e. one in which government intervention is reduced).

With these considerations in mind this thesis presents the following working definition of trade liberalization for public health researchers: Trade liberalization is the process of reducing government intervention in matters of trade.

Characterizing trade liberalization in this way prevents the confounding of liberalizing policies for processes which may increase a country's market integration; like export promotion strategies. It also ensures that liberalizing policies are not equated to increased trade flows or other measures which can conflate trade liberalizing policies for their presumed outcomes.

This definition also suggests potential methods for measuring instances of trade liberalization. For instance, trade liberalization may occur by way reducing government intervention in terms of imports (e.g. by reducing import tariffs), or by way of reducing government intervention in terms of exports (e.g. by reducing export subsidies). Importantly, this definition also points to ways trade liberalization should not be measured, for example via changes in trade flows (e.g. by reference to the value of imports and exports in relation to a country's GDP). Ultimately, understanding trade liberalization in this way will allow public health researchers to better understand and study the relevant pathways to health via more well-defined research boundaries.

10.3 Moving from the Theoretical to the Empirical

Following the literature review, this thesis moved to empirically explore a specific instance of trade liberalization (i.e. the phase-out of the Multi-Fibre Arrangement in 2005) and its impact on health via changes in the labour market. This move responded to the limitations mentioned previously of the literature review and adapted ecosocial framework, namely lacking empirical evidence, the fact that liberalization processes are especially under-conceptualized in relation to labour markets and that the mediating role of social policies were largely identified in the context of labour markets. This latter issue was important since the initial research objective of this thesis was to identify how trade liberalization and social policy interact to influence health and its social determinants.

Other considerations raised in the literature review also played an important role in the empirical work of this thesis. For example, the working definition of trade liberalization discussed above aided in the selection of a trade liberalizing episode. Moreover, the ecosocial framework guided important methodological considerations (as discussed in chapter 5 and mentioned briefly again in the next section).

With this case study in mind the second research objective of this thesis was to investigate and analyse how the phase-out of the Multi-Fibre Arrangement impacted health in countries reliant on the textile and clothing sector for employment (RO2). The concomitant research questions were as follows:

How did health outcomes change after the phase-out of the Multi-Fibre in countries reliant on the textile and clothing sector? (RQ2)

What are the potential causal mechanisms responsible for these changes? (RQ3)

The next section of this chapter will discuss the main progress towards this research objective and associated questions, as well as related contributions to the literature. Following this will be a consideration of how these results then link back to the literature review, the adapted ecosocial framework, and the first research objective of this thesis. Finally a consideration of where we are left in terms of next steps will be presented.

10.4 The Phase-Out of the Multi-Fibre Arrangement and its Impact on Health Outcomes in Countries Reliant on the Textile and Clothing Sector

This chapter will now turn to the contributions this thesis makes to the literature via its investigation of the health impacts of the MFA phase-out. To begin with, the thesis applied an original and innovative method in analyzing how trade and social policies interact to influence health: fuzzy-set qualitative comparative analysis (fsQCA) combined with process tracing methods. To date the large majority of public health scholarship which investigates macro-level conditions has relied on conventional multivariate regression models. These linear models average evidence across cases and isolate each explanatory variable by keeping all others in the analysis constant. While providing important information about what variables maximize health outcomes, these techniques neglect to take sufficient account of the contextual dimensions of cases and fail to address the interactive effects of causal pathways. This issue is especially important given considerations raised during the literature review, and captured in the adapted ecosocial framework, which emphasize that the relationship between trade liberalization and health is characterized by a complex set of concurrent and interacting pathways. In utilizing fsQCA, this thesis

has demonstrated the merits of an approach which assumes causal complexity and requires that a model be specified whereby independent variables are assumed to combine in a way which responds to the unique contextual environments of cases.

This case study work also offers some of the first empirical evidence of how trade liberalization interacts with social policies in the context of labour markets to influence health. In terms of answering the second and third research questions of this work, it is found that after the MFA phase-out only less developed countries experienced T&C employment growth. However, many less developed countries also experienced employment loss. In less developed countries which experienced T&C employment growth after the MFA phase-out, it is found that the worsening of adult female mortality rates seems to be related to an absence of social protection policies in combination with poor working conditions, which were likely to have worsened after the phase-out.

In highly developed countries which experienced employment loss after the MFA phase-out, it is found that the worsening of adult female mortality rates seems to be related to T&C workers' inability to access social protections, as well as few alternative work opportunities. This can be contrasted with a country like Portugal, which did not experience a worsening of adult female mortality rates. Evidence suggests that in Portugal, T&C work is characterized by a more standard, full-time employment relationship. As such, Portuguese T&C workers losing their employment after the MFA phase-out were likely to be covered by the country's collective dismissal regulations. These regulations would have required employers to give workers advance notice of dismissals and time off to look for alternative work. Evidence suggests that dismissed Portuguese T&C workers would have also been entitled to a minimum severance pay and possible re-training opportunities or early retirement.

However, there are noteworthy limitations to these above results. To begin with, the results are quite tentative in nature. As discussed in Chapter 9, this relates to data availability issues as well as broader methodological issues. A main limitation concerns the embeddedness of the case studies within a larger cross-case analysis. This relates less to the inherent nature of combining fsQCA with case studies than to the process tracing results themselves. Overall, T&C workers were found to have little access to social protection regardless of how countries were characterized in the

fsQCA. This means that the mechanisms which emerged were not associated with the original conditions of the fsQCA and that we are thus both limited in making claims about sufficiency and in generalizing these results to the situation of other countries characterized by similar solution paths

The precise causal mechanisms behind these results are also unclear. The EMCONET framework identifies a range of different pathways which may be influencing these results such as those related to material deprivation, health behaviours, physio-pathological changes and psychosocial factors. However, data on these more micro-level conditions were not uncovered in this work.

Moreover, while 53 countries were identified as reliant on the T&C sector, only 32 were included in the analyses. Inclusion of countries was limited by the quality of mortality data sources, as well as by the availability of data related to social protections. While excluded countries were comprised of both highly developed and less developed countries, it is unclear how their inclusion might have impacted the results of the analyses. This work thus reiterates calls for better quality cross-national health and social policy data.

Although there was a theoretical basis for doing so, by focusing on pathways to health in the context of labour markets, this work also neglects other potential health impacts of the MFA phase-out. It is likely for example, that the phase-out also had impacts on the physical environment through changes in industrial pollution with possible health consequences. In fact, changes in the physical environment arose as a potential health determining mechanism in some of the cases investigated in greater depth.

This work also focused on changes in national level health, but in some countries many T&C workers are migrants and thus not represented in national health figures (in Italy for example, there is a large population of Chinese T&C workers, in Thailand there is a large population of Burmese T&C workers). For these reasons, the health impacts of the MFA phase-out are likely underestimated.

Finally, this work is unable to offer much insight about countries which experienced improving adult mortality rates after the MFA phase-out. It is also unable to offer much insight about changing infant mortality rates after the MFA phase out. This is either because evidence supporting the sufficient relationships found in the fsQCA could not be fleshed out in the case studies or because these outcomes were not found to be sufficient with the conditions included in the fsQCA.

Despite these limitations, there are two important considerations to keep in mind. First is that the results of the analyses do point to the health importance of social protection policies and as such are aligned with previous comparative welfare state studies (Beckfield and Krieger, 2009). This relates not only to the causal mechanisms that emerged from this research, but also to case study work undertaken in relation to Brazil where evidence relates reductions in poverty, inequality and child mortality to an expansive conditional cash transfer programme. Despite the fact that a causal mechanism could not be constructed here, this evidence also indicates the health importance of protective social policies.

Second is that the fsQCA was undertaken as an exploratory analysis and process tracing was undertaken with the objective of identifying plausible causal mechanisms that could be tested empirically in subsequent research. As discussed in Chapter 9, these analyses do leave us better positioned to further investigate the impacts of the MFA phase-out. Process tracing results for example, uncovered a range of considerations, which if accounted for, can improve the validity of future cross-case analyses.

Moreover, aside from shedding causal (albeit partial) light on the relationship between the MFA phase-out and countries which experienced a worsening of adult female mortality rates, combining fsQCA with process tracing also shed meaningful light on broader considerations related to the health impact of the MFA phase-out, and on the relationship between trade liberalization and health more generally. This is described in Chapter 9 and reviewed again the next section.

10.5 Moving from the Empirical back to the Theoretical

In the context of the MFA phase-out, trade liberalization was found to increase competition within the sector via an intensification of price pressures. This competition in turn, impacted T&C labour markets both in terms of shifting employment and worsening working conditions. Social protection policies were found to interact with these considerations, and in response to the employment and working conditions of the sector in general, in many health important ways. For example, factors such as the size of T&C firms, the types of labour contracts through which workers were employed, and the types of labour overall which characterizes the sector (e.g. formal versus informal, legal versus illegal), were found to determine T&C workers' access to protective labour market and welfare state policies. These

employment and working conditions often in turn, relate back to countries' labour regulations and also respond to the competitive pressures of the sector.

In consideration of the first research objective of this thesis the following can be offered: social protection policies were found to both moderate pathways to health in the context of labour markets and influence the type of health related pathways resulting from trade liberalizing policies. Overall, the empirical findings suggest that social protection is often inaccessible to the type of workers who may be the most vulnerable to processes of liberalization, and that many workers are particularly vulnerable to processes of liberalization due to the structure of labour market and social protection policies. Perhaps surprisingly, this seems to be the case in both developed and less developed countries. In fact, social protection for T&C workers seemed to be greater in some less developed than more developed countries.

The results of the case study work also reemphasize considerations raised in the literature review. For example, that liberalizing processes in one part of the world can have important health implications in another. Also emphasized is one of the main considerations of the adapted ecosocial framework: that pathways from trade liberalization to health consist of complex, concurrent and interacting pathways. This was exemplified in the case work of Bangladesh where the MFA phase-out was found to impact female T&C workers in potentially contradictory ways: by enabling both improvements in material circumstances (and personal autonomy) as well as greater exposure to dangerous working conditions.

Findings from the empirical work do not however, suggest any adjustments to the adapted ecosocial framework, although they do underscore the difficulty in empirically considering the multiple dimensions and considerations which the framework highlights. For example, while the fsQCA analysis incorporated lagged health impacts, how the phase-out might fit into lifecourse theories of health was something this thesis was unable to explore. But this point perhaps drives home one of the main intentions and strengths of the adapted ecosocial framework which is that it can be used for initiating and thinking more in-depth about the full range of potential pathways to health originating from liberalizing processes.

The next and final section of this chapter will further consider where the findings of this thesis leave us in terms of next steps.

10.6 Next Steps

As previously discussed, the results of this thesis provide a basis for further delving into the relationship between the MFA phase-out and health. They also have important implications for undertaking novel work in related areas of public health and social research.

In this thesis, trade liberalization was examined as a process of quota removal. While the gradual liberalization of world markets means that quotas are now a relatively rare phenomenon, trade agreements may contain other processes of liberalization with important labour market impacts. This is important since much of the research which examines the health impacts of trade agreements is focused on biomedical and behavioral/lifestyle factors, related for instance to health care, diet, smoking and alcohol consumption.

For example, the Trans-Pacific Partnership Agreement (TPP) is a proposed trade agreement which has been under negotiation since 2010. Negotiations are currently taking place between 12 countries: Australia, Brunei, Chile, Canada, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, the United States and Vietnam. Several studies have directed attention to the potential impact of the TPP on health. Gleeson and Friel (2013) argue that the TPP will impact health largely through two main pathways. First, it is argued that the TPP will reduce access to medicines by increasing protections on intellectual property rights. Second, it is noted that the Agreement's clauses related to investor-state dispute settlement provisions 'could restrict the ability of governments to regulate industries that produce goods that contribute to the growing burden of non-communicable diseases, such as tobacco, alcohol, and highly processed foods' (p. 1508). Other work has also pointed the potential health impacts of the Agreement in relation to tobacco (Fooks & Gilmore, 2013; Kelsey, 2012, 2013; Pattemore, 2013), alcohol (Kelsey, 2012) and unhealthy foods (Friel et al., 2013).

However, work has yet to explore the health impacts of the TPP via its impact on labour markets. Indeed a particularly contentious issue of the TPP relates to the Agreement's impact on T&C labour markets (Bradner, 2013; Elms, 2012; Platzer, 2013). One industry source reports that the TPP could displace as many as 22,000 workers in El Salvador's textile industry (and another 15,000 jobs indirectly) (Fibre2fashion, 2013a). The textile and clothing sector in Vietnam, by contrast, is

expected to gain T&C employment as a result of the Agreement (Fibre2fashion, 2013b).

Another area of research relevant to the findings of this thesis is the body of literature focused more broadly on corporations and health. This literature is largely concerned with how corporate actors affect health through practices such as political lobbying, production techniques, product marketing, retail distribution, and pricing. Much of the work on corporations and health focuses its attention on six main industries: those related to alcohol, automobiles, firearms, food and beverages, pharmaceutical products, and tobacco (Freudenberg, 2014). While work in these areas is focused on the direct health impacts of these goods, the results of this thesis demonstrate an additional pathway through which corporate actors may influence health: labour markets. Taking methodological cues from this literature can thus facilitate new and important lines of inquiry that broaden our understanding of how corporate actors in the T&C sector, and indeed other sectors vulnerable to trade liberalization and poor labour market conditions, might impact health.

For example, this thesis was largely concerned with documenting the health consequences of the MFA phase-out. While this required investigation of important social and political determinants of health, such as labour market and welfare state policies, much needs to be done in terms of critically analysing the power relations shaping these and other relevant factors. For example, the power imbalances between different types of firms within the sector's value chain, as well as those between employees and employers.

Without acknowledging these types of power relations, the findings of this thesis, seem to direct exclusive attention to a need for greater availability of health promoting resources like unemployment insurance, higher wages, or better working conditions. However, investigating the sector from a more critical perspective, by focusing on corporate actors, can additionally direct attention to interventions that address exploitative and exclusionary processes, such as those aimed at strengthening the basis from which T&C workers can collectively bargain for greater labour and social protections. This critical perspective aligns with the conceptualization of trade liberalization which arose out of the literature review with its emphasis on the role of neoliberal ideology, unequal power relations, and the undue influence of powerful interests.

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