

# **CONFRONTING THE FORMULA FEEDING EPIDEMIC IN A NEW ERA OF TRADE AND INVESTMENT LIBERALISATION**

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Breastfeeding is rarely seen as an economic policy issue. Many view the idea of placing a dollar value on mothers' milk as repugnant. Breastfeeding cannot be framed as simply an economic relationship. It is a complex, physiological, emotional and social relationship between mother and child, intricately related to the nature of the society, community and family in which they live. Furthermore, the 'costs' and 'benefits' of breastfeeding fall both on individuals and on society as a whole. Yet in a world where not valuing something in dollar terms means it is not valued at all, this economic invisibility can have major consequences for the 'market' for mother's milk, for infant and maternal health and wellbeing, and for appropriate public policy.

In recent years, aspects of international trade and investment agreements have raised concerns that trade policy priorities may adversely affect governments' ability to protect public health and nutrition (Gleeson and Friel 2013; Lopert and Gleeson 2013). Trade liberalisation stimulates demand, through increasing competition, lowering prices and triggering greater product promotion. When the increased demand is for products like tobacco and unhealthy food, opening up markets raises serious concerns for public health.

Thirty years ago, the World Health Organisation (WHO) negotiated a pioneering agreement, called the WHO *International Code of Marketing of Breastmilk Substitutes* (henceforth, the International Code) to regulate the unethical marketing of infant formula and baby foods (WHO 1981). The 1981 International Code was one of the earliest international initiatives to address global regulation of food safety standards and misleading health claims and marketing, and a precursor to the 2003 Framework Convention on Tobacco Control (FCTC). Among other

things, the International Code regulated direct-to-consumer (DTC) advertising of breastmilk substitutes, and limited marketing to hospitals and health professionals, as well as promoting regulatory measures for safe feeding of children fed on infant formula.

The International Code was based on recognition of the importance of protecting breastfeeding, and of the unique vulnerability of mothers and their infants and young children to inappropriate marketing and promotion of commercial baby foods. The World Health Organisation/UNICEF *Global Strategy for Infant and Young Child Feeding* (WHO/UNICEF 2003) (henceforth, the WHO/UNICEF *Global Strategy*) recommends exclusive breastfeeding to 6 months, and continued breastfeeding to 2 years and beyond.

Global sales growth of 10-20 per cent a year in commercially-produced baby foods far exceeds the birth rate (Euromonitor International 2013). This growth is at the expense of breastfeeding. A recent *Lancet* study shows that 800,000 babies die each year, mainly in Asia, simply because they are prematurely weaned from breastfeeding (Black *et al.* 2013). In developed countries, it adds significantly to national health costs (Bartick and Reinhold 2010; Bartick *et al.* 2013; Renfrew *et al.* 2012; Smith, Thompson and Ellwood 2002). In both settings aggressive industry marketing of substitutes for breastmilk is an important contributing factor. Industry reports reveal that the Asia Pacific region is now the main growth market for the baby food industry, accounting for over US\$20 billion of the US\$36 billion global growth since 2003 (Euromonitor International 2013). UNICEF has warned that in East Asia and China, breastfeeding rates are falling at an ‘alarming rate’ (UNICEF 2012). In some countries, constraints on unethical marketing are weakening. The 2012 review of the International Code concluded that its global implementation remains inconsistent (WHO 2012b).

Despite the alarming trend, there is a surprising silence about the implications of expanding formula exports for breastfeeding practices in the Asia Pacific region (Galtry 2013a). As well as affecting public health in importing countries such as China, protecting breastfeeding creates significant policy conflicts for developed countries in the Asia Pacific region. Australasia presently leads the ‘white gold boom’ in formula exports to China and the Asia Pacific region (Correy 2013). The recent corporate manoeuvring to share in the vast profits from liberalised formula exports to China (Greenblatt 2013; Hemphill 2013; King 2013;

Urban 2013; Whitley and Stronger 2013) begs a number of important questions about the net benefits of trade liberalisation in this area, including:

1. To what extent do policymakers value breastfeeding as food production by women, and integrate this into economic policy priorities?
2. How do expanding markets in baby food affect breastfeeding, health and human rights in the Asia Pacific region?
3. Do trade agreements allow undermining of breastfeeding in the region by facilitating market expansion efforts by baby food companies?
4. Do global and national policies adequately protect optimal infant and young child feeding (IYCF)? How effectively is the International Code applied to baby food product promotion and marketing?

We begin by addressing the extent to which policymakers acknowledge and integrate the economic value of breastfeeding into economic policy, and incorporate public health recommendations on IYCF into trade and regulatory policy development. We then examine the extent to which trade policy may be reducing breastfeeding in both Australasia and China, and how effectively the International Code and related regulation is applied to baby food marketing in these countries. We conclude on the way ahead by urging the public health community to seek greater prominence for IYCF issues in trade negotiations and regulatory policy. Current deliberations by WHO technical advisors to strengthen the International Code (WHO 2013a) prompts consideration of whether the WHO/UNICEF *Global Strategy* should be strengthened along the lines of the FCTC.

## **Markets and Mothers' Milk – An Integrated Conceptual Framework**

Applying economic analyses raises awareness of the economic value of breastfeeding and the public policy importance of protecting women's production of human milk through breastfeeding. Feminist analysis of the economic incentives influencing women's breastfeeding decisions and practices highlights that unfettered market competition may

undermine optimal IYCF choices and population health outcomes (Smith 2004).

In a modern economy, breastfeeding by the mother ‘competes’ in product markets with: mothers’ own milk (expressed into a bottle and fed by someone else) or other mothers’ milk (supplied by hospital donor milk banks, or wet nurses); as well as, in particular, commercial baby foods and drinks including dairy or soy-based infant formula and ‘follow-up’ or ‘toddler’ formula, and a range of commercial weaning foods and juices which displace breastmilk or breastfeeding (Smith 2004). Breastfeeding and other forms of maternal care for infants and young children also compete for time with employers in the labour market. For example, exclusive breastfeeding is more time consuming than other infant feeding practices (Smith and Forrester 2013). Without adequate maternity leave and suitable workplace accommodation, employer demands and other time pressures create economic incentives for mothers to prematurely reduce or end breastfeeding.

The growing market dominance of commercial baby food producers in children’s diets, in the face of the ongoing accumulation of evidence on breastfeeding’s importance, reflects imperfections in the infant food ‘market’ which skew choices about IYCF. These ‘market failures’ include imperfect scientific evidence on the health and development consequences of infants consuming non-human milk; conflicting interests arising from the mother necessarily making decisions for the infant; market prices and employment conditions which do not fully reflect the broader societal costs associated with premature weaning from breastfeeding; and the competitive and marketing advantage which commercial breastmilk substitute producers (private companies) have over breastfeeding promotion efforts. These unrecognised social costs and information asymmetries, agency problems and unequal power relationships, along with commercial incentives for aggressive marketing reduce breastfeeding, and result in economically inefficient (and unfair) outcomes for society.

### ***A feminist economic perspective on valuing women’s unpaid work***

A key issue is the policy bias against breastfeeding and human milk production arising from the invisibility of women’s economic contribution in national economic statistics. Economists have long been

aware of the limitations of conventional national accounts in measuring economic activity and material well-being (Mamalakis 1996; Nordhaus 2000; Nordhaus and Tobin 1972; Weinrobe 1974; Zolotas 1983). Feminist economists have criticized, in particular, the failure to count women's unpaid and reproductive work as economic production and its exclusion from supposedly objective measures such as Gross Domestic Product (GDP), which, in principle, covers all transactions in economic goods and services. In 1988, Marilyn Waring published a book called *Counting for Nothing* (Waring 1988) on the need to value women's work, including reproductive and care work such as breastfeeding, in GDP. National accounting experts now make some acknowledgment of the crucial, unpaid role of families in building human capital, such as through investments of parental time in health care and education (Abraham and Mackie 2005: 79-93). However, more than two decades on from Waring's thesis, the problem of valuing breastfeeding in economic statistics remains largely unaddressed and ignored in public policy formulation (Smith 2014a).

Breastfeeding exemplifies the need to properly account for women's unpaid caring and reproductive work (Mulford 2012; Smith and Ingham 2005). By the late 1990s, a growing literature including an article published in this journal (Smith and Ingham 2001) estimated the value of breastfeeding for GDP (Aguayo and Ross 2002; Aguayo *et al.* 2001; Gupta and Khanna 1999; Oshaug and Botten; Smith 2013). The global value of human milk production was shown to dwarf the baby food industry because of the high market value of human milk (around \$100 per litre or more in North America). In Australia, for example, the gross value of total cow's milk production was A\$3.9 billion in 2011-12 (Dairy Australia 2012), which was similar to the A\$3.6 billion estimated annual value of human milk in 2009-10, based on existing breastfeeding rates (Smith 2013).

A 2009 review of GDP measurement for the French President led by two of the world's leading economists, Nobel prize-winners Amartya Sen and Joseph Stiglitz (Stiglitz, Sen and Fitoussi 2009:39) cited human milk production as an example of how current practices for measuring GDP devalued women's unpaid work and biased policymaking. They argue that breast milk constitutes a 'serious omission in the valuation of home-produced goods', which is 'clearly within the System of National Accounts production boundary, is quantitatively non-trivial and also has important implications for public policy and child and maternal health.'

Scholars have pointed out the significant consequences of this lack of recognition of women's economically valuable lactation work, including for policy advocacy, design, implementation and evaluation (Collas-Monsod; Elson 2008; Himmelweit 2002). Ignoring breastfeeding discounts the highly valuable role families, and in particular mothers, play in human capital development (Abraham and Mackie 2005). Policies which acknowledge the importance of this valuable non-market production, and the need to protect it from market forces include 'breastfeeding friendly' health and maternity care services, more adequate paid maternity leave, and effective regulation of unethical marketing and promotion of breastmilk substitutes (Smith and Blake 2013). These policies are also identified in the WHO/UNICEF *Global Strategy*.

***Health policy and health care services: causes and consequences of premature weaning***

The care and feeding of infants and young children also is an important unacknowledged element of the healthcare system (Budlender and Brathaug 2010; Ferran 2010; Van Esterik 1999). Breastfeeding is often a substantial part of this unpaid economic contribution. Breastfeeding reduces disease risk in both the mother and the child in both developed and developing country settings (American Academy of Pediatrics *et al.* 2012; Collaborative Group on Hormonal Factors in Breast Cancer 2002; Duijts *et al.* 2010; Horta and Victora 2013a, b; Ip *et al.* 2007; WHO 2003). Based on epidemiological evidence that lack of breastfeeding in infancy increases chronic disease risk by about 20-30 per cent, it is estimated that between 6 per cent and 24 per cent of the current chronic disease burden in Australia may arise from high formula feeding rates during the 1960s (Smith and Harvey 2011).

The substantial health system cost and sustainability implications of suboptimal IYCF is summarised in recent major economic studies. Such studies, in developed countries including Australia, reveal large health cost impacts for both acute illness and chronic disease and even death of mothers and infants from low breastfeeding rates (Bartick and Reinhold 2010; Bartick *et al.* 2013; Renfrew *et al.* 2012; Smith, Thompson and Ellwood 2002). Human milk is especially important for reducing treatment costs in neonatal intensive care settings (Boyle *et al.* 1983;

Ganapathy, Hay and Kim 2011). In the United States, the premature deaths of around 5000 women from diseases including breast cancer are attributable to low breastfeeding rates in that country; the estimated economic morbidity and mortality cost is around \$17 billion. Likewise around 500 infants die of SIDS attributable to lack of breastfeeding in the United States; higher breastfeeding rates would save around \$10.5 billion p.a. on the cost of infant illness and later life chronic disease. Furthermore, there is now strong experimental evidence that breastfeeding leads to higher IQ, with population level impacts of 3-7 IQ points (Kramer *et al.* 2008), akin to low level prenatal lead poisoning (Walker *et al.* 2007), and having significant cost implications for remedial education costs and national productivity (Drane 1997; Renfrew *et al.* 2012).

Evidence of these large scale impacts influenced the US Surgeon General in 2011 to call for research on the economic aspects of breastfeeding (United States Department of Health and Human Services 2011). In Australia, a 2007 Parliamentary inquiry into the benefits of breastfeeding and its impact on the long term sustainability of Australia's health system also endorsed the economic importance of breastfeeding.

Apart from the inequities between countries from inappropriate marketing of breastmilk substitutes, there are also health equity concerns within countries; in developed countries younger, less educated women, smokers, and those with less social or partner support and of low socio-economic status are less likely to breastfeed (Agboado *et al.* 2010; Amir and Donath 2008; Bai *et al.* 2010; Baxter, Cooklin and Smith 2009; Brown, Raynor and Lee 2011; Cameron *et al.* 2010; Collins, DiSantis and Nair 2011; Hauck *et al.* 2011; Kehler, Chaput and Tough 2009; Mehta *et al.* 2011; Persad and Mensinger 2008; Wijndaele *et al.* 2009; Yeoh *et al.* 2007). This socio-economic pattern in breastfeeding is becoming evident in developing countries such as China (Liu *et al.* 2013; Qiu *et al.* 2010). The future health costs to women and their offspring from inadequate breastfeeding may be greater for poorer women in the workforce due to other exacerbating factors (Galtry 1997).

***The invisibility of women's work, and breastfeeding: Implications of rising maternal labour force participation***

Promotion of breastfeeding as free or costless has, according to Rippeyoung (2009:36), been 'a convenient tool used by states to avoid responsibility for taking on more costly solutions to children's and women's health'. It also means that public policy formulation around maternal labour force participation often fails to recognize the need to protect optimal infant and young child feeding.

Labour market policy is crucial for protecting breastfeeding (Galtry 1997). Breastfeeding is usually lower among employed mothers, especially those without access to paid maternity leave and those working full time (Baxter, Cooklin and Smith 2009; Liu *et al.* 2013; Smith *et al.* 2013b). Time use research shows exclusive breastfeeding to 6 months as recommended by WHO/UNICEF (2003) takes around 18 hours a week (Smith and Forrester 2013). If workplace support is inadequate, and mothers choose to prioritise breastfeeding, this often represents a significant economic cost to women in terms of lost earnings and, in some cases, career progression (Rippeyoung and Noonan 2012).

Policy support for employed mothers to breastfeed is also necessary as employed mothers are a key target market for formula companies. Industry strategists point out that a need for convenience arising from high levels of female labour force participation in developed markets is driving the strong performance of toddler milk formula in developed countries (Euromonitor International 2008). Market reports on China recently also forecast strong sales growth based on rising female employment participation (AM Mindpower Solutions 2012).

Paid maternity leave is one of the key investments needed to implement the WHO/UNICEF *Global Strategy* (Holla 2013). Globally, lack of paid maternity leave and early maternal employment is associated with shorter duration of breastfeeding and lower rates of optimal IYCF (Heymann, Raub and Earle 2013). Maternity protection, as recommended by the International Labour Organization (ILO 2013), is not uniformly available in the formal employment sector and many women, especially those working in the informal sector, have none of these protections. This is a significant issue for breastfeeding in China (Hou 2014) and discrimination continues in Australia, despite the protection for pregnancy and breastfeeding provided by parental leave and promised by



anti-discrimination laws (Australian Human Rights Commission 2013). Quality childcare is also important to employed breastfeeding mothers (Pearce *et al.* 2012; Smith *et al.* 2013a), including ensuring proximity for breastfeeding younger infants.

### ***Breastfeeding and a human rights framework***

There are increasing calls to consider how trade agreements affect human rights. For example, the proposed TPPA is said to potentially contravene basic principles of international law, 'namely that countries' trade deals must not conflict with their obligations under human-rights treaties' (Schutter and Cordes 2014). Significant international human rights treaties, including the Universal Declaration of Human Rights 1948 and the International Covenant on Economic, Social and Cultural Rights 1976, also have implications for breastfeeding through asserting the right to food, nutrition and freedom from hunger, as well as to health and wellbeing.

Nutrition experts argue that a right to breastfeeding is also strongly implied in provisions such as those asserting the right to life and health (Kent 2001). Of particular relevance is the 1990 United Nations Convention on the Rights of the Child (CRC) requirement (Article 24, paragraph 2a) that States Parties shall 'take appropriate measures to diminish infant and child mortality' (Kent 2001). The CRC recognises 'the right of the child to the enjoyment of the highest attainable standard of health...' and commits States Parties to take appropriate measures 'to ensure that all segments of society, in particular parents and children, are informed, have access to education and are supported in the use of basic knowledge of child health and nutrition [and] the advantages of breastfeeding . . .' (Article 24). The highest attainable standard of health is through optimal breastfeeding (WHO/UNICEF 2003).

Aligned with the above instruments in a human rights framework is the ILO Maternity Protection Convention which focuses on maternity protection. Key elements of maternity protection are maternity leave, cash benefits so the mother can support herself and her child during leave; medical care; health protection from workplace risks, protection from dismissal and discrimination, and protection of breastfeeding on return to work (ILO 2010). ILO Maternity Protection Conventions date back to 1919, and recommend, as a minimum, maternity leave of 14

weeks as well as daily lactation breaks for nursing mothers (ILO 2000: Recommendation 191).

The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) provisions also support breastfeeding through establishing the need for maternity protection, as a fundamental component of sexual equality, alongside childcare facilities and other social services that allow individuals to combine family responsibilities with work and participation in public life. Recommendations that governments ensure development of institutions, facilities and services for the care of children also have implications for ensuring ‘breastfeeding-friendly’ childcare (Galtry 2002; WHO/UNICEF 2003).

Economic and social rights (including some affecting breastfeeding) may be only progressively realised by signatory countries. This may be because of specific resource constraints in particular contexts (Fukuda-Parr 2008), or due to differences in national practice. In 2013, the report of the Australian Children’s Rights Commissioner (National Children’s Commissioner 2013) highlighted UNHRC questions on Australia’s compliance on children’s rights to health, due to low rates of exclusive breastfeeding and the lack of effective regulation of baby food marketing in Australia.

Within a consumer choice paradigm for infant feeding, mothers may be wrongly characterised as simply ‘choosing’ to purchase formula (Morrison 2006). However, feminist critique shows that the breastfeeding component of maternity protection tends not to be fully valued or appreciated because, in contrast to pregnancy, breastfeeding is seen as ‘optional’ (Galtry 1997). Health behaviours are not simply a matter of individual choice but are also shaped by the material and social context in which people live, including public policies and regulation. This means that women who lack economic resources or access to relevant support may not, in reality, have the choice to breastfeed, and are thereby denied, along with their infants, the opportunity for health, development and wellbeing offered by breastfeeding.

Within a human right domain, breastfeeding is challenging because of the potentially conflicting rights of the mother and the child (Kent 2001). Nevertheless expert debate on this issue concluded that infants have a right to be breastfed, in the sense that no-one may interfere with the mother’s rights to breastfeed (Kent 2006). Alternatively, the infant may access breastmilk through other avenues, including milk banks, where

available, rather than being exposed to commercial breastmilk substitutes (Meier and Labbok 2009).

The International Code is not a treaty, but an intergovernmental resolution. Thus, although not legally binding it sets out specific recommendations to guide regulation of baby food at the global level. Together with national food regulations based on international guidelines from the FAO/WHO Codex Alimentarius, the International Code is intended to guide regulation of baby food at the global level. New WHA resolutions regularly address changes in marketing practices and clarify the scope and interpretation of the International Code.

The Code focuses on the inappropriate marketing and promotion of breastmilk substitutes. It includes agreed requirements to protect consumers against aggressive or inappropriate product labelling, advertising, and marketing and promotion such as to health workers and through the health system. Promotion to the general public is prohibited and the health care system should not display or promote breastmilk substitutes, nor accept free supplies. While acknowledging the legitimacy of the market for baby food products, the International Code recognises that mothers, as consumers and clients of health care services, remain particularly vulnerable and dependent on correct information about products which can interfere with breastfeeding.

As of 2011, the recommendations of the International Code had been legislated by only 37 of 199 countries (WHO 2012b). At the international level, a recent report of the United Nations Special Rapporteur (UNSR) on the Right to Food highlighted the ‘troubling’ under-enforcement of the International Code and subsequent World Health Assembly (WHA) resolutions (Special Rapporteur on the Right to Food 2014).

## **Trade Liberalisation and the Market for Baby Food**

The advantage of a rights based approach to breastfeeding is that it places legal and moral obligations on governments (Galtry 2013b). Such obligations to protect human rights cannot be overridden by other considerations and remain the responsibility of national governments (Kent 2003). However, as recent experience with trade liberalisation in the Asia Pacific region shows, unless there is the necessary policy coordination and integration, trade or industry policy priorities are unlikely to be balanced with human rights considerations. In particular,

the market liberalisation focus of WTO and other trade negotiations may produce economic gains for the population, but fail to address food, health or related human rights for infants and young children (Kent 2003). This section addresses the question of whether liberalisation of trade in commercial baby foods undermines breastfeeding and public health. In particular it considers recent links between trade liberalisation, baby food sales, and breastfeeding, and questions whether anticipated economic gains from liberalising this trade exceed economic production losses from reducing breastfeeding.

A key feature of recent globalisation and urbanisation has been the integration of countries and people into the global and national marketplace, through trade liberalisation, regulatory harmonisation and deregulation (Hawkes *et al.* 2012). Trade is conventionally considered a solution to problems with inadequate local supply of commodities. However, international trade and investment agreements allowing foreign firms to access new markets may stimulate demand for unhealthy products, by triggering increased market competition and market concentration, changes in product pricing, expanded product distribution, and greater marketing intensity (Baker and Friel 2014:10). Food trade liberalisation has recently attracted increased attention because of rising obesity and growing global chronic disease burdens such as heart disease and diabetes (WHO 2003). The shift from traditional dietary patterns and health behaviours, including from breastfeeding, is creating a ‘double burden’ of health costs of under-nutrition as well as over-nutrition (Khan and Talukder 2013; Popkin 2008), which is a growing threat to the sustainability of health systems in rapidly developing countries such as China (Popkin *et al.* 2001).

Multilateral trade negotiations through the WTO contain some provisions to prioritise public health through the Doha Declaration on the Trade Related Aspects of Intellectual Property Rights (TRIPS) (Lopert and Gleeson 2013). However concerns are growing about whether public health and nutrition in the Asia Pacific is adequately protected (Baker and Friel 2014; Labonté and Gagnon 2010); bilateral trade agreements negotiated outside the WTO may include intellectual property and/or investment protection provisions that constrain regulatory requirements. For example, the TPPA is potentially a strategy by some major Western countries to bypass the WTO Doha Declaration (Gleeson and Friel 2013). Such bilateral or regional treaties could constrain public health regulation of various unhealthy products (Gleeson, Tienhaara and Faunce 2012;

Friel *et al.* 2013; O'Brien and Gleeson 2013), as well as limiting affordable pharmaceuticals access (Gleeson, Lopert and Reid 2013).

Public health and economic researchers, while addressing highly processed foods, are largely silent about the interrelationships between trade in food, and the diets of infants and young children. Yet these wider public health and equity concerns are also highly relevant to global baby food systems. Many of the major players in the baby food industry are the large global pharmaceutical and food companies, such as Nestle, Pfizer, Mead Johnson, Danone and Heinz. Also, commercial baby foods are 'ultra-processed foods' (Monteiro *et al.* 2013). Just as expanded global trade and marketing of such products raises concerns about rising chronic disease, so too does growing milk formula consumption, which is an established dietary risk factor for later life obesity and chronic disease (Horta *et al.* 2007, 2013a; WHO 2003).

### ***Is market liberalisation undermining breastfeeding in Asia Pacific?***

In the Asia Pacific region, the recent growth in sales of commercial baby food has been especially rapid – led by booming sales to China (Euromonitor International 2008) – and has had an effect on breastfeeding. The recent rate of expansion in global consumption of formula, facilitated by trade liberalisation especially with China (Correy 2013; Lanigan 2013), is staggering. Global baby food sales were estimated at US\$32 billion a year in 2007, of which \$11 billion of the market was in the Asia Pacific region, with just US\$4.6 billion in China (Euromonitor International 2013). By 2013, this had risen to an estimated global market of \$58 billion a year, of which US\$27 billion is in the Asia Pacific. China is now the largest single market in the world with baby food sales of over \$16 billion a year, forecast to double again within five years.

Table One, on the following page, summarises trends in global, regional, and selected country baby food sales from 1999-2017.

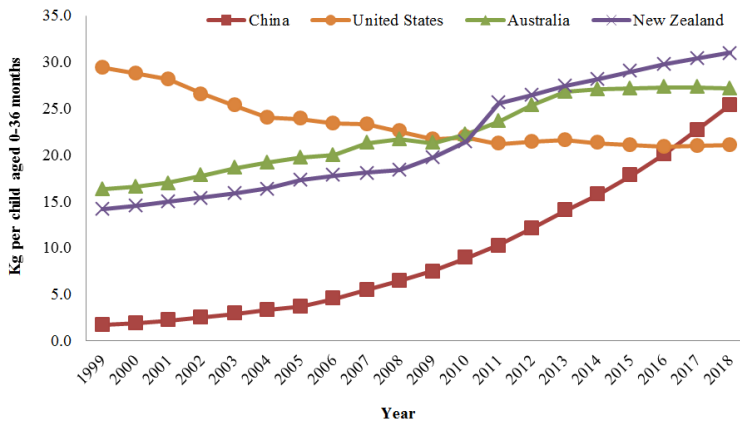
**Table One: Global, regional, and selected country baby food sales (including milk formula), 1999-2017**

	World	Asia-Pacific	Baby Food China	Milk Formula
<b>1999</b>	17,783	4,881		
<b>2007</b>	31,686	10,663	4,617	4,145
<b>2008</b>	35,578	12,746	5,837	5,250
<b>2009</b>	38,792	14,956	7,385	6,676
<b>2010</b>	42,281	17,258	9,055	8,225
<b>2011</b>	46,640	19,974	10,984	10,003
<b>2012</b>	51,994	23,278	13,756	12,572
<b>2013</b>	58,046	27,310	16,006	14,656
(a)				
<b>2017</b>	89,111	47,291	27,512	25,434
(a)				

Source: Euromonitor (2013).

Note a: Figures for 2013 and 2017 are forecasts.

**Figure One: Per capita sales of baby food, selected countries**



Source: Euromonitor (2013).

Sales of commercial baby food in China expanded from 1.7 kg per child aged 0-36 months in 1999 to 12.1 kg in 2012. By 2018, 25 kg of commercial baby food per child will be sold in China, a level comparable with western countries. Sales are mostly milk formula with toddler formula sales growing particularly rapidly. Figure One, on the previous page, summarises trends in market penetration for selected countries.

In developed countries markets for commercial baby food especially infant formula are stagnating or declining, with little per capita growth in sales expected. According to industry analysts, this shrinkage in western formula markets is mainly due to stronger regulation of baby food marketing, fewer hospitals giving product samples to new mothers, and greater promotion of breastfeeding (Euromonitor International 2008). Although China has legislation which regulates the marketing and promotion of baby foods and formula, such policies and regulations are not well known and are not enforced. Industry strategists contrast the *laissez faire* approach to regulation in China with the complete prohibition of baby food advertising in India and growing regulation of western baby food markets. In India, per capita sales of baby food remain below 1 kg per child for the foreseeable future.

Fierce competition surrounding the liberalisation of market entry into China during the past decade has triggered aggressive marketing and promotion of formula via health services, just as it did when import controls were eased in Australia in the 1950s (Smith 2007). Marketing and promotion of formula, including through the Chinese health care system is now pervasive (Correy 2013; Harney 2013; Reuters 2013). A recent WHO study found that health services are a priority promotion route for baby food companies in the region (WHO 2013a), and in China, recommendation by paediatricians is a major factor behind mothers introducing formula (Qiu *et al.* 2010). In 2013, an investigation of China's enforcement of marketing legislation on baby food found widespread corruption, and promotion of formula brands through health services. Such corrupt or unethical practices have even resulted in formula companies providing training and education for health workers. International baby food companies operating in China have bribed hospital officials (Guilford 2013; Lin 2013), with formula manufacturer Danone replacing its management team in China following allegations of corrupt dealings with hospital staff (Rose 2013). Corporate regulators in the United States have fined Pfizer and its subsidiary Wyeth over forty-five million dollars for activities in China (SEC 2012), while

investigations are also underway regarding Mead Johnson (Lin 2013). Although Chinese hospitals became accredited under the WHO/UNICEF Baby Friendly Hospital Initiative (BFHI) (WHO/UNICEF 2009) during the 1990s, implementation in maternity care services is very weak.

Furthermore, while many women are entitled to paid maternity leave, such entitlements are often not enforced, with implications for breastfeeding duration. At the individual level, it remains cheaper for mothers to formula feed than breastfeed despite the risks associated with formula feeding. This apparent paradox is partly explained by the hidden cost of breastfeeding that Chinese households bear due to lost maternal labour market participation, earnings and, in some cases, career opportunities where the mother cannot easily combine breastfeeding with employment.

China is now facing a disturbing decline in breastfeeding and high chronic disease scenario, comparable to that which occurred in Australia in the 1950s and 1960s, but on a more massive scale. In the past five years, breastfeeding rates in China have halved. The latest UNICEF data (from between 2008 and 2012) show exclusive breastfeeding among infants aged 6 months and below at 28 per cent (UNICEF 2014) down from 67 per cent in 1998 (Wu 2014). While breastfeeding rates vary considerably across China, lower income mothers who often lack paid maternity leave are more likely to formula feed (Qiu *et al.* 2010). This means they are also highly exposed to weak regulation of food safety standards for infant formula, as evident during the 2008 melamine crisis (Xiaojing 2011). Around 300,000 infants were hospitalised with severe kidney pain and several died as a result of milk adulteration - said to be a widespread practice in China - by local dairy suppliers in 2008 (Pei *et al.* 2011). As a result, Chinese consumer demand for the more expensive imported infant formula brands skyrocketed as consumers moved away from domestic brands.

During 2008, Chinese demand for wet nurses also soared as those who could afford it sought alternatives to formula feeding (Fowler and Ye 2008). This highlights the large economic value of lost production implied by the decline in breastfeeding in China. In 2010, Chinese mothers of infants and toddlers produced an estimated 3.6 billion litres of milk for their children, compared to 4.9 billion litres if optimal breastfeeding was the norm. Valued at current market prices of \$85-100



per litre, the current economic value of human milk produced in China is at least US\$100 billion below its biological potential (Smith 2012).

In Australia, meanwhile, baby food sales reached over US\$600 million in 2012, having doubled since 1999 (Euromonitor International 2013). Per capita sales also continue to increase, now averaging over 20 kg per child and forecast to rise to 27 kg by 2017. This has implications for breastfeeding. In Australia, there has been no evidence of improvement in breastfeeding duration since the 1980s (Amir and Donath 2008). According to the 2010 National Infant Feeding Survey nearly 30 per cent of infants are fed formula in hospital (AIHW 2011). The Australian National Children's Commissioner recently reported that 'only two in five infants were exclusively breastfed to around four months' (2013: 28). Although human milk production in Australia has been estimated at potentially over A\$7.6 billion a year, production is currently at less than half that value (Smith 2013).

Trends in baby food sales also have implications for food security for infants and young children throughout the region. Early in 2013, and again in April 2014 (Astley 2014), Australian and New Zealand supermarket shelves were destocked due to informal exports of infant formula to China (Jones 2013; Mercer 2013).

Recent corporate merger activity in Australia and worldwide has highlighted the importance of the growing Asian market for dairy products. The current takeover battle for Warrnambool Cheese and Butter company is, in part, a corporate contest to sell infant formula to China (Price 2013; Wilkins and Johnston 2013). Australian dairy exporter interests in Asia are considerable; milk formula sales to China are currently around A\$80 million a year and total dairy sales around A\$500 million (Guilliatt 2014; Locke 2014).

In New Zealand infant formula is an 'export superstar', and of considerable significance to the small economy (Galtry 2013a; Galtry 2013c). In 2009, formula exports were said to be worth NZ\$753 million, from NZ\$63 million a decade earlier. In 2013 business commentators suggested New Zealand's formula export income may be NZ\$1 billion (Dann 2013) but estimates vary (Adams 2014). Questions have been raised about the government's ability to completely trace or verify the infant formula market's supply chain (Staff 2013), and the value of unlawful exports of infant formula (mostly to China), including Internet

sales, could be between NZ\$150 million (New Zealand Ministry of Primary Industries 2013) and \$500 million a year (Staff 2013).

China reduced its tariffs on formula from 15 per cent to 5 per cent in early 2014 (Lanigan 2013). Preferential trade agreements, such as that signed in 2008 by New Zealand and China, have also helped New Zealand to develop its dairy industry and exports to Asia (Guilliatt 2014; Lanigan 2013). Australian industry is now seeking comparable trade agreements to improve the competitiveness of its dairy products (Dairy Australia 2013).

Nevertheless, to date, there has been minimal debate in Australia and New Zealand on the public health and ethical implications of the baby food sales boom in the Asia Pacific region. With public disquiet about environmental, human and animal wellbeing associated with the New Zealand's dairy industry's dramatic expansion, Galtry (2013c) has questioned whether this is also undermining global 'best practice' infant feeding. She argues that while there is strong support for increased trade and exports, there are few voices promoting global infant health and that discussion is needed on this issue by the New Zealand public health community. In response, New Zealand's Infant Formula Exporters Association's representative declared that exporters had no responsibility for the public health consequences of its sales in China as consumers chose it, and it was up to the Chinese government to look after public health (Harris 2013).

In Australia the recent suggestion that formula exports contribute to the decline in breastfeeding in China (Smith 2014b) attracted a rapid response from the Infant Nutrition Council. It denied irresponsible marketing, and claimed that 'the vast majority of the industry in Australia and New Zealand behaves honourably'. Furthermore, it said, 'council members have not only made a commitment to this ethical behaviour in Australia and New Zealand but in all the countries we export to and market in' (Carey 2014).

### ***Are governments providing effective protection for breastfeeding?***

Both China and Australia have national government policies supporting breastfeeding. However, these policies are poorly coordinated with trade and industry policy, which prioritise the baby food industry and exports, and fail to consider human rights regarding breastfeeding or the large

economic losses when formula feeding expands at the expense of breastfeeding. Based on conventional marketing spend of around 10 percent of revenue, more than \$5 billion a year is now spent globally promoting commercial baby food. In contrast, promotion of human breastmilk, a health food, is vastly under resourced. Here we consider the extent to which governments are adequately protecting breastfeeding and public health, particularly through implementation of the International Code.

In 2014, the national government in China declared a goal of increasing exclusive breastfeeding rates among infants aged less than 6 months to 50 per cent by 2020 (Wu 2014). Tasked with reversing the major declines in breastfeeding in the past decade, the Chinese National Commission on Maternal and Child Health and Family Planning recently urged a ban on advertisements of breastmilk substitutes, more appropriate maternity care, and a focus on enforcing maternity protection for employed mothers (Hou 2014).

However, lack of effective health, labour market and regulatory policies to support this goal remains a major factor in China's low breastfeeding rates (Hou 2014). Despite the evident urgency of protecting breastfeeding since the 2008 melamine crisis, the Chinese government has not directed resources to protecting, promoting, and supporting breastfeeding in accord with the WHO/UNICEF *Global Strategy*. Instead, it has prioritised repairing the damaged reputation of the formula industry. Industry subsidies have encouraged increasing production scale, as part of a strategy to promote rationalisation and regulation of the domestic industry, and tighten the regulation of foreign imports (McAloon 2014; Zang 2013). While improved regulation of local milk formula manufacture was clearly needed, the overall impact of the Chinese government policy response is to protect the viability and expansion of the industry and its ability to promote formula feeding as 'safe', rather than acknowledge and prioritise the economic value of human milk, address the maternity protection needs of mothers with infants, and promote the importance of breastfeeding within the health system.

In Australia and New Zealand policy statements support breastfeeding, with, for example, the *Australian National Breastfeeding Strategy* (ANBS) agreed by Australian state and federal health ministers in 2010 (AHMC 2009). The ANBS arose from the 2007 'Best Start' federal Parliamentary Inquiry which recommended requiring maternity care

services to achieve BFHI accreditation and improving policy support for employed women to breastfeed (House of Representatives Standing Committee on Health and Aging 2007). Concerned at extensive evidence of aggressive marketing of baby foods, and aware of the health system savings from breastfeeding, the ‘Best Start’ Inquiry also recommended implementing the full International Code and subsequent relevant World Health Assembly (WHA) resolutions, including by legislation and mandatory enforcement. However, the ANBS has no specific commitment of federal or state government funding and four years later, a detailed Implementation Plan has yet to be published. There is no evidence of any significant changes in Australian breastfeeding rates (Mortensen and Tawia 2013), nor are there plans to evaluate the effect of the ANBS on feeding practices.

In New Zealand, domestic policy has successfully centred on BFHI implementation with drastically increased exclusive breastfeeding rates on hospital discharge (Martis and Stufkens 2013). There have also been incremental improvements in maternity protection, such as parental leave duration and eligibility as well as workplace breastfeeding breaks legislation. By contrast, New Zealand’s infant formula trade policy has been developed without reference to breastfeeding and health concerns, other than those relating to food safety.

Commercial infant food sales and exports are also facilitated by public fiscal support and weak regulation in both Australasian countries. In Australia, a federal government marketing grant for ‘innovation’ has underpinned an internet based expansion of ‘organic’ formula sales to China (Truss 2004). Domestically, baby food is exempt from the Australian Goods and Services Tax (GST) while human milk sales and production has no such tax concession, and is ‘input taxed’ (Smith 2000); that is, any products needed by breastfeeding mothers including lactation aids such as breast pumps are subject to GST, despite other ‘medical aids’ being exempt. In New Zealand, infant formula companies receive public subsidies to promote formula exports to China (New Zealand Taxpayers’ Union 2013; Powley 2013; Small 2013).

Such perverse Australasian fiscal treatment of breastmilk compared to formula milk is surprising from a public health perspective. Tax instruments for public health objectives have been highly effective in promoting smoking cessation (World Bank 1999), and heavier taxation is an important instrument under WHO’s Framework Convention on

Tobacco Control (FCTC) guidelines. Australia is a leader in implementing the FCTC policy framework.

As in China, Australian and New Zealand government policy regulatory responses to formula-related public health crises in recent years have mainly aimed to protect the local formula industry's reputation and facilitate continued sales and exports. For example, when informal exports to China were depleting supermarket shelves in Australasia in 2013 and 2014, the regulatory response by the Australian and New Zealand governments focused on protecting the national 'clean and green' branding from potential fraud and misrepresentation (Harris 2013).

Although WHA resolutions have strengthened International Code provisions, and called for companies to adhere to it, Australia's implementation has been weakened. Australia took limited and belated action on the International Code in 1992, through authorising a narrow self-regulatory agreement by industry (MAIF 1992); marketing and promotion activities by retailers remained unconstrained, and the agreement covered only infant formula. Despite promotion of 'toddler' formula being shown to serve as de-facto brand advertising for infant formula (Berry 2010), the Australian government has allowed industry to promote it, and it is now clear that from 1992 the local industry switched its focus to marketing 'toddler' formula (Smith and Blake 2013). The dramatic increase in this marketing, including through internet and TV advertising, has resulted in warnings that consumers were being misled by confusing product labelling (Nous Group 2013). However, despite WHA resolutions and WHO statements confirming International Code coverage of such products (WHA 2010; WHO 2013b), the Australian Department of Health website wrongly claimed that International Code provisions excluded toddler milks (Salmon, Smith and Heads 2013). In 2013, in direct contradiction of the 2007 'Best Start' Inquiry recommendation to strengthen International Code implementation (House of Representatives Standing Committee on Health and Aging 2007), the Australian Government withdrew financial support for oversight of the MAIF agreement (Hudson 2013).

Just as introducing legislation in advance of signing a trade agreement helps a country to defend such regulation against claims it breaches WTO provisions, abolishing existing regulations can be expected to facilitate future industry challenges to later legislative implementation of the

International Code. Meanwhile, notably, there has also been a decade-long delay in changing Australian baby food labelling regulations to reflect WHO and NHMRC guidelines for 6 months of exclusive breastfeeding. This delay has been attributed in part to co-regulatory arrangements with New Zealand that are part of the trade liberalisation framework between the two countries (FSANZ 2013).

Toddler formulas are now central to company marketing strategies for promoting baby food sales in China and other Asia Pacific countries (Euromonitor International 2008). By making health claims as well as marketing ‘convenience’ to time pressed working mothers (Euromonitor International 2012), these products play unethically on mothers’ insecurities and vulnerabilities (Timmons 2014). In 2010, the WHA expressed concern that follow on and toddler formulas are marketed in a way that confuses consumers and reduces breastfeeding, and WHO has recently concluded these products are unnecessary and unsuitable for children due to potential problems of excess nutrients (WHA 2010; WHO 2013b).

As has been the case for the tobacco industry, the focus of the baby food industry is supposedly on increasing market share by promoting sales at the expense of commercial competitors. Yet the fundamental nature of marketing is to increase sales of products by shaping popular culture to redefine consumer ‘needs’ and create new markets (Slater 2011), and in the case of baby foods, the competition is with breastfeeding.

In the case of tobacco, the 2003 WHO FCTC provides a strong basis for appropriate comprehensive public health regulation (Muggli *et al.* 2013; WHO 2012a). The comparable international instrument for baby foods, the International Code, is non-binding and presently has much less force. Even this is a limited and narrow response to the growing global problem of suboptimal IYCF. While some countries have taken steps to make the International Code legally enforceable, in most it is narrowly focused and compliance relies substantially on public monitoring and complaints. Most importantly, its implementation is not well integrated with national policies on protecting, promoting and supporting breastfeeding. Nor are such measures embedded more widely into national commitments to implementation of the comprehensive WHO/UNICEF *Global Strategy* and other international human rights instruments.

Furthermore, a significant issue in governments’ attempts to regulate the marketing of IYCF products has been the argument of industry that such

regulation breaches WTO rules and investment protection provisions of international trade treaties regarding intellectual property rights and trademarks. Such arguments emerged in South America and Africa during the mid-1990s when the world's largest baby food companies, Gerber and Nestle, challenged national laws on baby food marketing in Guatemala and Zimbabwe (Mokhiber 1996). Similar legal arguments have been raised in the Phillip Morris challenge to Australia's plain paper tobacco packaging legislation, based on investor protection provisions of a bilateral trade treaty with Hong Kong (McGrady 2012). Such arguments have been contested by legal scholars in the context of tobacco (Davison 2012; Voon and Mitchell). Nevertheless, these same positions underpin a current challenge by the baby food industry to proposed Hong Kong laws implementing the International Code. Moreover, the Hong Kong government has been warned by industry advocates that it 'may find itself before a WTO tribunal' if it goes ahead with its Code (Kogan 2013a, b; Timmons 2014).

The parallels between the regulatory problem of tobacco sales and baby food products are compelling. As a leader of international action on tobacco control, Australia has tested the legal issues with plain paper packaging of cigarettes in its highest court. In light of the above it is both timely and appropriate for Australasian governments to consider strong and comprehensive public health action to regulate the inappropriate marketing and promotion of products which undermine optimal IYCF. Given Australia and New Zealand's role in industry expansion in the Asia Pacific region, the scope of baby food regulation should include not only domestic but also export sales.

Public policy in Australasia should also give consideration to the effect of formula exports in potentially diffusing public pressure in China for improved social protection through such policy measures as effective implementation of maternity protection and the International Code. In particular, the availability of cheap imported formula underpins availability of maternal labour supply for China's industrialisation and undermines pressures for enforcing maternity leave entitlements. The lack of adequate regulatory response by Australasian governments to the baby food export boom can thus be argued to undermine the human rights of women and, by extension, their infants in China.

Trade and industry policy in Australasia should also incorporate consideration of the lost production of human milk arising from growing

market penetration of commercial baby foods. Despite the evident risks to the food security of infants and young children from low breastfeeding rates, Australia's recently released *National Food Plan* failed to address ways to protect, promote and support breastfeeding (Department of Agriculture 2013). Local formula companies on the other hand, clearly considered the issues for infant and young child feeding, advocating that Australia's food planning policy continue self-regulation of the baby food industry in consideration of 'the global context of the food supply' (INC 2010).

## **The Way Forward**

Since the 1990s, globalisation has heightened the need for better coordinated policies, as well as improved institutions of global governance to address population health issues in a human rights context. Efforts are being made to coordinate economic and health policy (Sachs 2001) and enforce human rights responsibilities on business (IBFAN 2014a). However, the contrast between the aggressive assertion of (and government acquiescence to) 'investor rights' to protection under international trade law, and the ineffectual national implementation of international law on the rights of infants, young children and women to maternity protection, food and health, could not be more stark.

Specifically in relation to baby food marketing, experience shows that while the non-binding International Code has been in place for over 30 years it is limited in its effectiveness through relying on individual countries' goodwill and effective implementation. Yet baby food companies, many of which are transnational in scope and unburdened by any sense of national or ethical responsibility, use various tactics including legal threats based on supposed clashes with WTO rules to circumnavigate or directly challenge the International Code's implementation (IBFAN 2014b). In the emerging globalised trade environment and in the age of increased internet advertising and pervasive marketing, transnational corporations and free trade agreements, it is also important to consider whether the International Code alone can be relied on to protect breastfeeding. It is questionable whether all states that sign such agreements are truly sovereign and have both the will and resources to implement and enforce such a Code. Arguably the International Code should not be the main international



instrument directed at optimal breastfeeding. Much has been learned about how to improve breastfeeding. Just as the WHO FCTC and now the UNSR on Food recognises the need for broad ranging measures to protect public health from untrammelled promotion of industry and investor/shareholder interests, so too does protecting mothers to breastfeed require more comprehensive approaches, such as that set out in the WHO/UNICEF *Global Strategy*. Countries that have implemented the appropriate mix of regulation, policies and programmatic interventions to address suboptimal IYCF have seen dramatic increases in breastfeeding (Lutter 2014)

With reference to the Asia Pacific region and in response to the problems for public health policy created by dramatic economic transformation and trade expansion, Lee (2014) notes the challenges for public health policy created by this region's dramatic economic transformation and trade expansion. She suggests there is a need for health governance to transition to a 'deterritorialised' world of global citizens tackling shared problems with evolved institutions. This analysis is also relevant to issues of balancing milk formula trade and IYCF policy in the Asia Pacific region. Recent developments, in particular the rapid expansion of trade, including in infant formula, exemplify the need for global regulations and institutions to control marketing that transcend individual countries' borders. As the case of New Zealand and Australian exports to China shows, it is unrealistic to expect that individual countries will control corporate behaviour beyond their own borders without such global agreements in place.

As in the early 1980s, there are now suggestions for the adoption of a binding treaty on the obligations of transnational baby food corporations which incorporates a human rights approach (IBFAN 2014a). Meier and Labbock (2009) argue that breastfeeding offers strong prospects for rights based regulation. Key to this is the CRC's requirement that children's rights are upheld and violations of these are addressed (IBFAN 2014b). The right to the highest attainable standard of health has been upheld in the CRC (Article 24). Most recently, in 2013, this right was interpreted in the CRC's *General Comment No. 15* (2013), to specify that besides States' obligation to implement and enforce the International Code (para. 44), baby food companies have the direct obligation to comply with it in all contexts (para. 81).

Such global regulation of commercial baby food marketing needs to be seen as an integral component of current initiatives to address the growing regional burden of obesity and chronic disease through reform of unbalanced international food trade and production systems. The important role of breastmilk in infant nutrition and, by implication, the food system has been recently endorsed by the UNSR, who encouraged some Asia Pacific governments' moves towards regulating advertising, noting that: 'suggestions that these steps could violate WTO law by restricting international trade are simply false' (Schutter 2014).

We propose that consideration also be given to the adoption of a comprehensive international regulatory framework for baby food similar to that controlling tobacco – the 2003 WHO FCTC (WHO's first international treaty). Writing recently in *The Guardian*, Assadourian for example (2014), argued for a global treaty modelled on the WHO FCTC, to ban all marketing of formula, require breastfeeding assistance in hospitals, and provide paid maternity leave. The WHA could also strengthen the International Code by passing it as a regulation, as had been planned in 1981 (Sokol 1997). Others have argued for an Optimal Protocol on IYCF to be added to the CRC (Kent 2011). In conjunction with a global regulation, the formation of an independent international judicial body to oversee, prosecute and sanction violations could also be considered (IBFAN 2014b).

Strengthening international and national law to protect, promote and support mothers' and infants' rights is, as shown in this article, entirely in keeping with the high levels of international legal protection claimed by companies in WTO-related processes for their right to profit from intellectual property.

## Conclusion

A feminist economic perspective highlights the invisibility of women's health care work, including breastfeeding, in economic statistics. This, along with existing public health, labour market and trade policy silos, means the economic losses from undermining breastfeeding are unlikely to be recognised and valued by trade policymakers. Maternity protection to facilitate breastfeeding and human milk production is often given a lower priority by governments than expanding the more visible international trade and production of formula milk, which has lesser

value to the economy than human milk. As a consequence, public health and the economic benefits of breastfeeding are ignored. This article has also drawn attention to the links between trade liberalisation and aggressive and unethical marketing of baby food including infant formula, and their adverse public health consequences.

Questions are thus raised regarding the responsibilities of governments to protect breastfeeding beyond their own jurisdictions. This is made more complex by the involvement and trans-territorial responsibilities of multi-national baby food industries. The need to identify solutions is crucial for parts of China and the Asia Pacific region, where populations are often vulnerable and ramifications of low breastfeeding rates more severe, due to poverty, lack of education or poor health care.

As is the case with tobacco control, the challenge that remains is for governments to properly coordinate trade, investment and health policy, giving a greater priority to public health concerns, including breastfeeding. Legislation to protect breastfeeding from unethical marketing in formula-exporting countries like Australia could have significant implications for exporters, including changed responsibilities for the marketing of breastmilk substitutes in the Asia Pacific region. Ideally, legislation would be supported by strengthened International Code implementation internationally along the lines of the 2003 FCTC, requiring both reporting and cooperation between countries to effectively formulate and implement a comprehensive policy.

These moves would be timely, given many of the increased challenges facing the control of infant formula exports and marketing that relate to trade liberalization, foreign direct investment and global marketing and advertising across countries. The international smuggling of formula, and its aggressive promotion in maternity care settings in another country, cannot be resolved by the actions of individual countries. There is simultaneously an urgent need for action in rapidly industrialising importing countries, particularly China, to extend and implement maternity protection and the International Code. This includes strategic collaborative defence against legal challenge in the WTO. Once lost, the culture and practice of breastfeeding is difficult and expensive to regain.

Further work is required at both the national and international levels to determine appropriate reforms to national and global health governance frameworks for infant food export and marketing in this region. While Australia and New Zealand are small players in a large and complex

global configuration, these countries could and should take ethical leadership, especially for their own exports and marketing of infant formula.

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