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Food safety and urban food markets in Vietnam: The need for flexible and customized retail modernization policies

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A B S T R A C T

Access to safe and healthy food is a crucial element of food security. In Vietnam the safety of daily vegetables is of great concern to both consumers and policymakers. To mitigate food safety risks, the Vietnamese government enforces rules and regulations and relies strongly on a single approach for organizing food provision; being modernizing retail by replacing wet markets with supermarkets. In general, reorganizing food provision in this way is increasingly considered to be a guarantee for food safety, especially in urban settings with growing populations. To assess the effectiveness of this induced retail modernization of the fresh vegetables market in Vietnam's capital Hanoi, this paper examines for whom and under which conditions does this approach deliver the desired outcomes. The survey data and interviews show that ongoing retail modernization in Hanoi reaches only a minor segment of the population and drives a large group of shoppers into informal vending structures. On the basis of five case studies, this paper demonstrates how similar supermarket interventions can yield contrasting outcomes when they do not accommodate for differences in shopper population and do not adapt to variations in the urban conditions. To reduce exposure to unsafe food, particularly for poorer segments of the population, we conclude that developing a flexible portfolio of retail modernization pathways and adopting a reflexive policy approach provide better impact and leverage, as opposed to the current trend of promoting supermarkets as a single, ideal-type form of food shopping.

Supermarkets at the core of food retail policy in Vietnam

Recurring incidents with pesticide residues in food products and regular breaches in food hygiene have placed food safety high on the policy agenda in Southeast Asia (SEA). Ensuring the safety of daily food purchases is particularly important in the case of fresh foods. In urban food markets in Vietnam, the focus of this study, the safety of fresh vegetables is a key concern, frequently reported in the media as well as in policy development and public discussions (Figuié, 2004; Van Hoi et al., 2009). Vegetables are a daily staple in the Vietnamese diet and are preferably consumed with every meal. The per capita vegetable consumption in Hanoi, 290 g per day (Wertheim-Heck et al., 2014b), is among the highest in the world. The prominence of vegetables in the Vietnamese diet mandates the investigation of how food safety policy interventions relate to the shopping practices of different consumer groups.

Strategies to mitigate food safety risks often build on approaches to sourcing, retailing and purchasing structures developed in Western settings (Henson and Caswell, 1999). As a result, policies aimed at improving food safety increasingly entail the reliance on process control through public–private co-regulation in the context of modern supermarkets (Martinez et al., 2007; Yamaguchi, 2014). In the rapidly developing economies of Southeast Asia, food safety concerns resulting from industrialization, urbanization and increasing distance between producer and consumer are addressed in a similar way (Reardon et al., 2007). Goal-oriented policymakers conflate modernization with Westernization, expecting that aspirations for modern lifestyles and concerns about food safety motivate the adoption of supermarket shopping habits by individual consumers.

Public policy in SEA tends to place supermarket development at the core of strategies aiming to ensure access to safe food. Supermarkets are considered instrumental for realizing food safety improvements by implementing private food safety management systems and maintaining food hygiene standards (Reardon, 2005). This preferred model implies the restructuring of existing modes of food provision and the construction of new retailing structures from scratch.

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Especially in the Socialist Republic of Vietnam, with a socialist-oriented market economy, the government plays a powerful interventionist role in the modernization of food markets by promoting 'supermarketization' as a generic path and replicable model suitable for all consumers. In various policy documents and media statements, the Vietnamese government presents supermarkets as important instruments and drivers for the transformation of the country into a modern society (MoIT, 2004, 2009; Table 3). Retail modernization policies aim at stimulating supermarket expansion along with the reorganization and reduction of traditional markets. The dominant policy model not only sets out to reorganize food markets, but also is expected to induce a shift in shopping practices on the consumer side (see Section 'Which policy? Food safety regulation and retail modernization in Hanoi' for a detailed policy review). Supermarketization seeks to substitute daily visits to wet markets[1] with weekly shopping at supermarkets (Dries et al., 2013).

However, the typical modern retail formats are still a niche phenomenon, with supermarkets in Hanoi contributing just 2% of total vegetable consumption (Wertheim-Heck et al., 2014b). This is partly explained by patterns in supermarket diffusion (Reardon et al., 2003) and has stirred discussions on the need for global retail corporations to embed their retailing models in local consumption cultures, sourcing systems and urban planning (Coe and Lee, 2013; Reardon et al., 2007; Wood et al., 2014; Wrigley et al., 2005). The importance of embedding novel retail formats in local shopping practices is also reflected in recent entry strategies of transnational corporations (TNCs) in Vietnam.[2]

In the discussions on the 'waves' of supermarket development and the ways in which TNCs enter and penetrate developing food retail markets, supermarketization in itself is not questioned. Indeed, there is a gradual expansion of supermarkets in Vietnam's urban centers since the country opened up its market to fully foreign-owned corporations in 2009 (Nguyen et al., 2013).[3] Yet, supermarkets, especially when compared to the persistent practices of shopping at wet markets (Humphrey, 2007; Wertheim-Heck et al., 2014a), are a relatively small channel for securing fresh vegetables for daily meals. Persistent consumer habits are challenging the policymakers' exclusive focus on supermarkets in food safety policies. Retail modernization policies lead to the marginalization of existing wet markets, where traders and consumers have already developed often long-standing relationships and shopping routines, which are important for coping with food safety risks (Wertheim-Heck et al., 2014a). As an unintended consequence, an increasing number of consumers started shopping at uncontrolled and unhygienic street markets (Wertheim-Heck et al., 2014b). Moreover, recent studies in Thailand indicate that a decrease in wet markets, which provide affordable healthy foods, puts healthy diets at risk (Banwell et al., 2013; Kelly et al., 2014). Therefore, food safety policies that exclusively promote the supermarket retail format may actually be counterproductive.

The aim of this paper is to assess the effects of supermarketization on consumers in urban areas in Vietnam: who benefits, who is excluded, and what are the consequences. Our approach combines quantitative survey research with qualitative interviews. In addition, we documented case studies of different shopping locations and practices to illustrate the emerging and ongoing process of market transformation. By searching for intermediate outcomes (Ton et al., 2011), which are observable in daily consumer practices in emerging novel food markets or in more gradual modifications of the arrangements between consumers and food sellers, this research provides insights into the processes moving toward the long-term policy goals as set by Vietnamese policymakers. As a form of 'ex ante policy impact assessment' our results inform future policy design (Ton, 2012) and contribute to the discussion on alternative retail modernization models in Southeast Asia.

The paper has four main sections. Section 'A process approach to policy evaluation' briefly reviews the academic literature on the topic, underpinning the rational choice models dominant in policy development, and combines literature on practices theory approaches with methodological insights from realist evaluations, which enable the assessment of the viability of supermarket development within different contexts. Section 'Methods' details the design and administration of the field research. The empirical findings in Section 'Results: retail modernization policy in practice' describe the dominant policy model in Hanoi and deliver a taxonomy of consumers, exploring the questions who has adopted supermarket shopping in everyday vegetable shopping practice and under which conditions. Section 'Results: retail modernization policy in practice' presents case studies of processes wherein concrete policy interventions transform traditional markets. The paper concludes with a discussion about the added value of a broader portfolio of policy interventions compared to the ongoing promotion of the ideal-type, Western-style supermarketization for delivering social betterment. Therein we highlight the need for policies that are adjustable and responsive to different circumstances.

A process approach to policy evaluation

In Vietnam, retail modernization in the form of stimulating supermarket and hypermarket development is seen as cost-effective and better capable of delivering food safety guarantees, compared to corrective and restrictive regulations and legislation. Policymakers heavily rely on rational choice models (which are critically examined by Shove, 2010; Whitford, 2002; Warde and Southerton, 2012). These models expect consumers to shift to more 'civilized' and guaranteed safe shopping outlets, once readily available, driven by food safety concerns and aspirations for modern lifestyles. Policies based on this model, however, do not necessarily deliver the intended results (Evans et al., 2012; Shove, 2010). Although traditional food supply systems are not sufficient for ensuring food safety and meeting the demand for modernization (Pingali, 2006), shoppers do not automatically integrate supermarkets into their daily practice, especially for fresh foods (Goldman et al., 2002; Traill, 2006; Humphrey, 2007).

The resilience of local cultural traditions and routines (Cox, 2007; Jackson, 2004), urges the development of more flexible and diverse modernization policies, better attuned to the daily lives of consumers. As put forward by Shove (2010) and Evans et al. (2012), the complexity and dynamics of social life should not be ignored simply because they are too difficult to grasp within current policy frameworks. The role of agency in change processes is visible in the everyday practice of selling and buying vegetables at specific retailing sites. It is therefore important to study the practices of ordinary consumers at various retailing sites (Spaargaren, 2011). Accordingly, research needs to include (1) the context where the practices take place, (2) the practitioners involved in the practices and (3) the temporal and spatial dimensions of the practices, addressing interventions as active and embedded.

[1] Wet markets are fresh food markets, commonly found in Asian countries, in which wet refers to the wet floors due to the abundant use of water.

[2] In January 2015 Japanese Retail Corporation Aeon Co. has taken a 30 percent stake in Vietnam state-owned FiviMart Co., which operates 20 stores in Hanoi, with the aim to increase its understanding of local business: http://www.japantimes.co.jp/news/2015/01/28/business/corporate-business/aeon-announces-tie-up-with-major-vietnamese-retailers/#.VMj67mSUfYl (last accessed 08.12.2015).

[3] Compared to other Southeast Asian countries supermarket development in Vietnam started rather late, first in Hanoi around the turn of the century, initially with domestic, state-owned enterprises. Since Vietnam's entrance into the WTO in 2007 and accompanying acceptance of wholly foreign-owned transnational corporations in 2009, supermarket development has been accelerating.

This paper seeks to detect the types of processes that effectively influence consumer choices about where and from whom to purchase daily vegetables. This requires a precise understanding of the processes through which the retail modernization interventions do or do not deliver the intended effects. Evaluating policies by only measuring the end effects (e.g. counts of supermarkets or population reached) does not allow for the detection of context-specific causal pathways. Although measuring outcomes is valuable, patterns are often not differentiated or precise enough to offer an understanding of why and how policy interventions resulted in the observed outcomes. The process elements in policy evaluation studies are usually treated as a 'black box' (Kazi, 2002).

Our study seeks to advance the development of more sensitive and responsive retail modernization strategies. Acknowledging context-specific diversity, we assess the retail modernization policies to date, beyond the dominant approach of assessing policy effects through end-of-pipe measurements (Stame, 2004). Although we do not contest that outcomes are important indicators of policy, measurable outcomes do not explain how the effects came into being, beyond the isolated causal input–output relation. By portraying and analyzing the specific processes and results produced by policy interventions in different settings, our paper contributes to a more contextual understanding of retail modernization policies in Hanoi. We assume that public policies aimed at the amelioration of food consumption in terms of hygiene and safety are more likely to succeed when they take into account the dynamics of the practices of consumers who are buying vegetables.

The so-called realist policy evaluation body of literature (Pawson and Tilley, 1997) can provide a valuable contribution. It investigates what works, for whom and under which conditions and thereby has the potential to inform under which conditions policy models require adjustment. A realist approach helps to explore the middle ground between macro-institutional and micro-behavioral research, with the aim to unravel meso-level mechanisms (Hedström and Ylikoski, 2010). Meso-level analyses focus on the intermediary processes or pathways through which a certain policy outcome is realized (Gerring, 2008). The key question for realist evaluation is how retail modernization strategies work out in real life – not how they are supposed to work. What types of results do they produce, for whom (providers and distributors, buyers of vegetables, food safety regulators etc.), and under which conditions?

With this realist policy evaluation approach in mind, the following research questions guide our study:

1. What is the extent of the outreach of modernized retail formats in terms of inclusion of different social groups?
2. What context-specific processes and circumstances influence the uptake of modified or modern retail formats by different social groups?

Methods

Our open-ended research questions, which aim to examine not only the effects, but especially the generative mechanisms at work, informed the use of a mixed methods study design. We combined quantitative research to measure policy outcome effects with qualitative research, to unravel why and how specific interventions bring about these effects (Brady et al., 2006; Kazi, 2002; Pawson and Tilley, 1997). We followed a flexible and pragmatic method selection process (Robson, 2002), in which the findings helped formulate new questions and select the most appropriate methods 'along the way'. This allowed us to dig deeper into emergent topics during the fieldwork, while consolidating research rigor through method triangulation. Furthermore, by working with multiple investigators per method we could minimize researcher bias.

We approached the realist evaluation question – what works, for whom, and under which conditions – in four parts (see Fig. 1).

First, desk research, expert interviews and field work was used to describe the phenomenon under study: the retail modernization policy (intervention model) in urban Hanoi, its targeted outcomes in relation to more controlled and safe vegetable retail provisioning, and the assumptions underpinning retail modernization policies.

Second, we measured the outcomes to date, portraying which groups within the population were or were not reached with the modernized retail formats. We started with research among the population that was reached by the retail modernization interventions through a supermarket and convenience store shopper survey. Thereafter, we conducted a study within groups of the population that appeared to be excluded from the policy interventions as detected in the shopper survey.

Third, we explored the phenomenon of retail modernization in Hanoi through a collective case study design (Stake, 1995). The five selected cases represent the main variations in the policy-induced experiments of retail modernization. We used the case studies to understand how policy interventions work out in practice. Case studies are acknowledged to be valuable for exploring the causal mechanisms behind policy outcomes (Bennet and Elman, 2006; Gerring, 2004; Gillham, 2000; Pawson and Tilley, 1997; Vellema et al., 2013). We followed the case study protocol as described by Yin (2009), who advocates for case studies as the preferred strategy (1) when 'how' and 'why' questions are posed; (2) when contemporary events are investigated; and (3) when the setting is non-contrived.

Finally, we concluded our research with an analysis on variations in social inclusion observed within different contexts through pattern matching (Gerring, 2004), resulting in a taxonomy of patterns in supermarket adoption, based on the question for whom and under which conditions does the current policy deliver the targeted outcomes? A detailed overview of all methods used within our study is provided in Table 1.

Results: retail modernization policy in practice

Below we present the results in three parts along our research overview (see Fig. 1). We first describe the policy-driven model. Second, we use survey and interview data to examine for whom this conversion may or may not work, and, third, we present a selection of the case studies (with interview excerpts), demonstrating the effects of retail modernization at specific locations in Hanoi.

Which policy? Food safety regulation and retail modernization in Hanoi

Government explicitly aims to reduce food safety incidents through a combination of legislation and retail modernization. Legislation in Vietnam (Law on Food Safety (LoFS), No.55/QH12/2010) aims to assure that '*food shall not cause any harm to people's health and lives*'. The LoFS is the umbrella guideline on managing regular occurrence of food safety incidents, defined as '*any circumstances arising due to food poisoning, a food-borne disease or other circumstances arising in relation to food that cause harm to human health and lives*' (LoFS). The law assigns responsibilities among the Ministries of Agriculture and Rural Development (MARD), Health (MoH), and Industry and Trade (MoIT). An important aspect is the provisioning of foods through sales outlets '*to keep and maintain the hygiene of the business places*' (LoFS). MoH formulates the

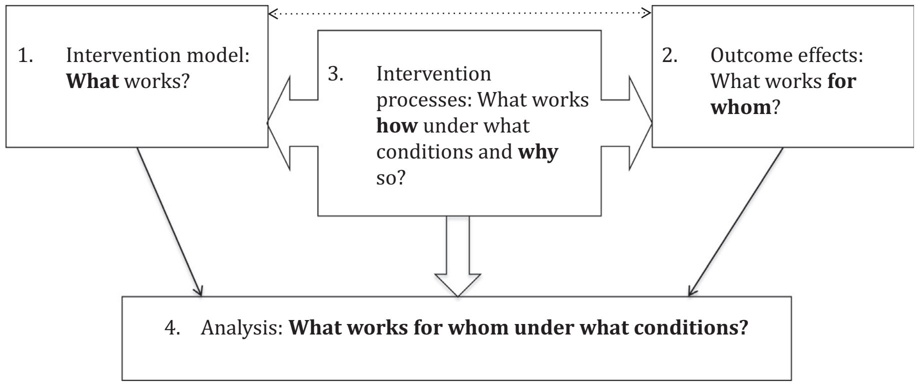


Fig. 1. Research overview.

Table 1
Overview of methods applied.

1. Intervention model (Section 'Which policy? Food safety regulation and retail modernization in Hanoi')		
What?	2008–2013	Desk research
	2010–2012	Expert interviews (N = 3): urban planning expert, trade/retail policy advisor, retail management
	2008–2013	Count of supermarkets and convenience stores selling vegetables
2. Intervention outcomes (Section 'For whom? Policy outcomes in terms of social inclusion')		
For whom?	2012	Shopper survey[β]: N = 1005
		Including 604 supermarket shoppers at 12 supermarkets and
		401 shoppers at 17 convenience stores
For whom not?		Lower income class (4–7.5 mln VND/month) research, including:
	2012 Jun	• Vegetable shopping observations + intercept interviews (N = 9)
	2012 Jul	• Shopping journals (N = 19)
	2013 Sep	• Household survey[¶] (N = 152)
	2013 Oct	• Focus Group[§] (N = 8)
	2013 Oct	• In-depth interviews[§] (N = 8)
3. Intervention processes (Section 'How did retail modernization interventions perform under place-specific conditions?')		
How under what conditions?	2008–2014	Collective-case study of policy in practice at consumption junctions (N = 5)
		Observational research of policy in practice over time (field notes)
		Vendor interviews (N = 12)
		Shopper intercept interview (N = 29)
4. Analysis: Taxonomy of patterns in supermarket adoption (Section 'Analysis: What works, for whom, and under which conditions?')		
What works for whom under what conditions?	2013–2014	CMO configurations
		Pattern matching

All questionnaires used in this research were developed in English, translated in Vietnamese, crosschecked on meaning with 2 professionals and tested in the field before being implemented.
All survey data were analyzed in IBM SPSS Statistics 20 – descriptive statistics
[β] Shopper survey: Face to face interviews through randomized sampling in stores across 9 (out-of 10) urban districts of Hanoi: Đống Đa, Hoàng Mai, Long Biên, Cầu Giấy, Hai Bà Trưng, Từ Liêm, Hoàn Kiếm, Tây Hồ, Hà Đông. Supermarket formats included: Big C, FiviMart, Unimart, Intimex, Co.opMart; Modern wholesale Metro C&C was not included. Only shoppers who stated to be the primary person responsible for vegetable shopping within their household were included in the survey. A professional team of interviewers conducted the survey; all interviewers received questionnaire training upfront.
[¶] Household survey: Face to face interviews through door to door sampling across 5 urban districts of Hanoi: Đống Đa, Hoàng Mai, Long Biên, Cầu Giấy, Hai Ba Trung. Inclusion criteria: – Legally registered as temporary or permanent residents of Hanoi (Unregistered/informal migrants are excluded). – Household income lower than 10 million VND per month (which was in 2012 approx. <4.1 USD/cap/day). – Respondent main responsible for food shopping and preparation within the household. Interviewers were recruited among social sciences students from the low-income target population; professional consumer researchers trained all interviewers before conducting the survey.
[§] Participants for the focus groups and in-depth interviews were approached with the assistance local Women's Union; to be able to establish rapport with the interviewees, students from the low-income target population conducted the interviews; professional consumer researchers trained all interviewers before conducting the interviews.

food safety standards and regulations, while the actual structuration of trade and retail falls under the MoIT. Important in this respect are the Prime Ministerial Decision No. 559/QD-TTg on the development of market places 2004–2010, Decision 146/2006/QD-UB on incentive mechanisms for supermarket construction in Hanoi, and Decision 99/2008/QD-BNN, requiring all vegetables entering modern retail outlets to possess a certificate issued by official government authorities verifying that the vegetables have been produced in accordance with national regulations on safe vegetable production.

Over the past decade, Hanoi has been undergoing a profound transformation of urbanization and modernization, which accelerated after the expansion of the administrative boundaries of Hanoi in 2008 and the opening of the retail business sector to foreign-owned entities in January 2009, as a result of Vietnam's WTO commitments. Modernization policies are instigated by the ambition to transform Hanoi into a prosperous and modern 'civilized' capital. An important aspect of the policy measures concerns the system of food retailing. Traditionally, food retailing is concentrated in open-air markets. These markets neither fit the picture of a modern and civilized food provision system nor do they comply with international food safety and hygiene standards in food provision (WHO, 2006).

The policy related to food retailing builds on two pillars. One pillar is the reduction of traditional markets. In 2010, Hanoi counted 67 permanent markets, 213 semi-permanent markets and 113 temporary sheds markets. By 2020, when the policies have been fully implemented, it is expected that only 14 of the total 67 permanent markets will remain (MoIT, 2009). The policy interventions to reduce the role of traditional markets in the food retailing include: (1) restriction of the construction of new markets; (2) upgrading and renovation of markets; and (3) transformation of markets into supermarkets. The development of new markets will be restricted in the sense that they are not included in the urban planning of new suburban residential areas.

The second pillar regards the expansion of modern retail formats. In 2009 the supermarkets that sell vegetables in Hanoi accounted for 23 stores; by 2013 this number had increased to 67 and is projected to triple from 2013 to 2020 (Table 2). Policy interventions aimed at stimulating modern retail development include (1) the development of supermarkets in office buildings and residential apartment complexes; (2) suburban supermarket development; (3) chain convenience store development; and (4) locating supermarkets in department stores.

Vietnamese policymakers expect that the combination of ubiquitous concerns regarding the safety of daily consumed foods and the growing aspiration for modern (Western) lifestyles, in particular among the younger population (45% of the population is younger than 25 years old [GSO, 2012]), will drive the adoption of supermarkets for everyday food shopping. The lagging adoption of supermarkets to date is still importantly related to their limited presence, which motivates the government's push for supermarket development.

This top-down enforced supermarketization policy prompted a lively debate, both in the media and in academic circles (Figuié and Moustier, 2009; Geertman, 2010; Maruyama and Trung, 2007; Mergenthaler et al., 2009; Moustier, 2006), on the advancement of retail modernization and the preservation of more traditional vending structures. As a consequence, the proposed Hanoi Trade Development Plan for the period 2010–2020 with a vision up to 2030 (MoIT, 2009), which reaffirms the direction of retail modernization as laid out in the plan 2004–2010, has not yet been approved by the Hanoi Peoples Committee. The plan is argued to promulgate supermarket advancement at the cost of traditional vending structures. While the participants in the debate do not challenge that fundamental changes in the existing system of food retail are needed from a food safety and civilization perspective, they do question whether existing policies are able to meet the demand. On the other hand, officials from the central and Hanoi governments persistently advocate in favor of replacing wet markets with modern supermarkets (see Table 3 for a selection of statements made in the media).

In the section below we describe the outcomes of the dominant supermarketization policy model to date. The term 'outcome' is used here to mean the adoption of modern retail formats in the daily practice of shopping for vegetables, the desired result of the policy intervention.

For whom? Policy outcomes in terms of social inclusion

The retail modernization policy has currently not realized the intended outcome in supermarket uptake, reaching a select group within the urban population only, while resulting in unintended effects on other groups. Below we first show which specific group is reached with the recent retail modernization interventions, followed by an in-depth look on how retail modernization affected other groups. Retail modernization interventions have deprived large groups from daily access to fresh vegetables and thereby potentially worsened instead of ameliorated the food safety situation.

Who buy vegetables in supermarkets and convenience stores?

Our survey among vegetable shoppers in supermarkets and convenience stores revealed that consumers, who benefitted the most from the expansion of modern retail outlets for vegetables, have higher income and higher education levels than the average Hanoi urban population and shop less often than shoppers at markets (Table 4). Food safety is the main reason for buying vegetables at a supermarket (85%) or convenience stores (76%, Fig. 2), while respondents who shop for vegetables more than four times per week place a relatively higher importance on freshness (Fig. 3). Supermarket shoppers are relatively young (34% younger than 30 years old) and shop less often, though still 68% purchases vegetables more than four times per week. Shoppers in convenience stores have a higher shopping frequency than supermarket shoppers, similar to wet-market shoppers, but the main reason for buying vegetables at convenience stores also appeared to be food safety. The higher shopping frequency of convenience store shoppers corresponds with their relative higher rating of freshness as an important criterion for vegetable purchases.

In summary, the apparent relation between income, shopping frequency and choice of shopping outlet indicates that supermarket shoppers are a select few and have a specific socio-demographic profile within the Hanoi urban population. This consequently has led us to examine the question: who is not reached with the policy interventions that aim to foster social betterment in terms of improved access to more controlled, safe and hygienic vegetable retail outlets?

Who does not buy vegetables in supermarkets and convenience stores?

Just 13% of the supermarket shoppers included in our survey belonged to lower income groups, which account for more than 40% of the total urban population (AC Nielsen, 2013). Our research indicates that food safety is very important to these select shoppers from the lower income group: *'Food needs to be safe first, to ensure my family's health'* (focus group). They spend on average ~50% of their daily budget on food (household survey). They are willing to spend on food safety, in particular vegetables: *'Vegetables are the worst; you never know what a real safe vegetable is'*; *'I rather be a bit hungry when I know that the food I eat is safe and nutritious'; 'I invested in an ozone machine to better clean my vegetables' (focus group).* In our household survey among lower income groups only one out of 152 respondents reported to buy vegetables at supermarkets. In the focus group and in-depth interviews, however, lower income households showed an interest in buying vegetables at supermarkets. Although the offer in supermarkets is not

Table 2
Supermarket store development in urban Hanoi (only outlets selling vegetables included).

	2000	2007	2010	2011	2012	2013	2014	2020	2025
Supermarket* count	2	17	24	35	41	55	63	178	1000

- 2000: GAIN Vietnam Retail Food Sector 2000.
- 2007–2014: Field work – formats included in count: BigC, FiviMart, Citimart, Unimart, Intimex, MaxiMart, Hapro, VinMart, SapoMart, LotteMart, Co.opMart, Minh Hoa and wholesale Metro C&C.
- 2020: projection in MoIT trade Development Plan 2010–2020–2030.
- 2025: ambition MoIT; http://english.vietnamnet.vn/fms/business/112996/hanoi-vows-to-build-more-supermarkets–eliminate-traditional-markets.html (last accessed 20141001).

Table 3
Representative selection of press articles on retail modernization 2011–2014.

20110616	Building Trade Centre, Supermarket System in Hanoi: In Need of Stronger Drives Shopping at supermarkets has become a demand and routine of Hanoians but they fail to meet the demand because of the shortage and irrational location of supermarkets... According to the wholesaling and retailing network planning for the period from now till 2020, Hanoi will have 178 supermarkets, trebling the current number http://www.vietnambreakingnews.com/2011/06/building-trade-centre-supermarket-system-in-hanoi-in-need-of-stronger-drives/#.U0zf0l7mZGw (last accessed 20140415)
20120709	Hanoi urged to look for suitable models for traditional markets Upgrading the operational traditional markets into modern ones is a must. However, it is necessary to find out a suitable model for the new markets ... Despite the failures, Hanoi authorities still insist on renovating the traditional market network, trying to turn them into modern markets, suitable to a modern capital city http://news.chaobuoisang.net/hanoi-urged-to-look-for-suitable-models-for-traditional-markets-201455.htm (last accessed 20140415)
20120624	Shoppers Prefer Traditional Markets The trend to upgrade or replace traditional markets with supermarkets in Vietnam's urban areas was not necessarily a good one for shoppers or traders ... Traditional markets and vendors meet 95 percent of domestic demand for food and other necessities. Supermarkets and shopping centers cater to other customers, often foreigners http://businesstimes.com.vn/shoppers-prefer-traditional-markets (last accessed 20140415)
20120528	Protest against wet-market reconstruction into modern commercial center http://vietbao.vn/Kinh-te/500-tieu-thuong-quay-UBND-quan-Cau-Giay-phan-doi-xay-cho-moi/2131472960/87/ (last accessed 20140428)
20131203	Hanoi Retail Market Booming at Year-end Ocean Mart has opened a branch of 10,000 square meters. Ocean Retail is also preparing to launch another grand supermarket of more than 11,500 square meters in Vincom Mega Mall Times City, besides two other supermarkets in the urban areas. http://vccinews.com/news_detail.asp?news_id=29690 (last accessed 20140417)
20140929	Hanoi vows to build more supermarkets, eliminate traditional markets Despite economists' opposition to the 1,000-supermarket plan proposed by the Hanoi Industry and Trade Department, officials are still determined to go ahead with it ... with an expected population of 9.4 million and an annual income per capita of $17,000, the development of 1,000 supermarkets by 2030 was "quite within the reach". Traditional markets would no longer be built in the inner city, while existing traditional markets with an area of over 3,000 square meters will be upgraded into hypermarkets or shopping malls http://english.vietnamnet.vn/fms/business/112996/hanoi-vows-to-build-more-supermarkets–eliminate-traditional-markets.html (last accessed 20141001)

Table 4
Profile supermarket and convenience store shoppers compared to generic Hanoi population.

	Supermarket shoppers	Convenience store shoppers	Hanoi population
Income % upper and medium income classes[a]	87	74	39[a]
Education % completed university or higher education	70	55	42[b]
Shopping frequency % shopping for vegetables everyday	40	73	87[c]

Shopper survey $N = 1005$ (401 convenience store; 604 supermarket shoppers).
[a] AC Nielsen HIB in VND/month; Database Nielsen 2012.
[b] Ministry of Planning and investment (GSO, 2011). Vietnam population and housing census 2009. Education in Vietnam an analysis of key indicators.
[c] Market shopper survey 2009, Fresh Studio (>90% of vegetables are sold through markets; Wertheim-Heck et al., 2014b).

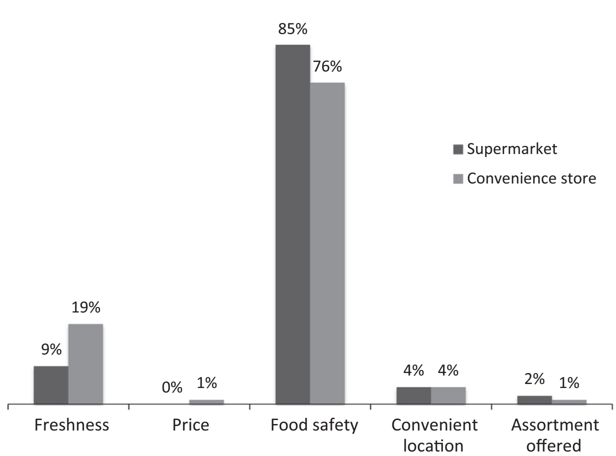


Fig. 2. Importance of different aspects in shopping for vegetables across retail formats. *Source:* Shopper survey, $N = 1005$ Price is often assumed to play a major role in the preference for markets above supermarkets, however this is neither confirmed in our current research, nor in previous consumer research by Fresh Studio, second affiliation of principal author. Price collection across different channels in Hanoi by Fresh Studio has learned that vegetables in supermarkets are generally rather similarly priced to vegetables markets, even produce with an explicit food safety claim is generally not more than 10% higher priced than conventional produce at markets.

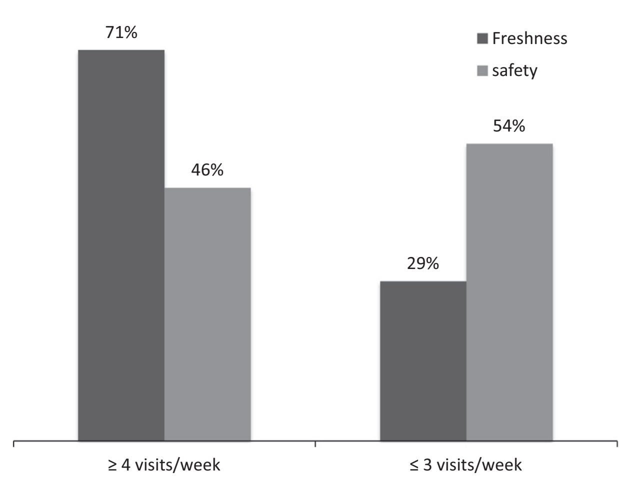


Fig. 3. Importance of freshness related to shopping frequency (total freshness = 100% and total food safety = 100%) *Source:* Shopper survey; $N = 1005$ (401 convenience store; 604 supermarket shoppers).

necessarily completely trusted, the better hygienic conditions and official food safety certifications are valued: *'I believe that supermarkets at least try to ensure the safety of the vegetables they offer' (interview #4).*

However, supermarket shopping appears to be outside their reach for two important reasons. First, lower income households plan their food budget on a daily basis. More than 60% of the interviewed households depend on unstable jobs for their livelihood. Daily variations in income define the daily variations in food budget and consequently they have no choice but to shop every day. They cannot afford to purchase large amounts of food due to these budget constraints. Supermarkets are considered inconvenient, as they are more suitable for large volume shopping: *'At supermarkets you buy a lot' (focus group).* Second, supermarkets are importantly outside the action radius of lower income groups, making them especially not a practical option for every day, small quantity shopping. Lower income neighborhoods are not prime locations for private retail investors, and consequently supermarket development is located in higher income areas. Lower income households depend on traditional vending structures within their vicinity. The reduction in permanent markets resulted in a situation wherein consumers are deprived from instead of provided with controlled vegetable shopping outlets. As a result they have no choice but to rely on less hygienic informal and uncontrolled street vending (Wertheim-Heck et al., 2014b).

In summary, based on the survey data we estimate that around 40% of Hanoi's urban population is reached with the current retail modernization policies. A large group of the urban population is thus excluded. In striving to provide better guarantees of safe and hygienic retail conditions, current policy interventions appear exclusive and partly counter-effective, unintentionally driving large groups of the population into the contested 'uncivilized' street vending structures. To improve the policy's social inclusion, these outcomes urge the further examination of how interventions work out and under which conditions and why this is the case.

How did retail modernization interventions perform under place-specific conditions?

Focusing on the effectuation of the retail modernization policy over the period 2008–2014, we documented different processes that generate changes and continuities in buying practices at different locations in the city. The five case studies below demonstrate how concrete policy interventions can transform traditional markets and how supermarkets can become embedded in different urbanization paths. The purpose of comparing these case studies is to obtain an understanding on how a more generic supermarketization process evolves under varying contextual conditions. The obtained insights can inform policymakers in their quest to improve hygiene and food safety in the everyday shopping practices of consumers. Each case study starts with a description of the concrete intervention followed by an explanation of the 'why' and the 'how' behind the observed outcomes.

The first two cases describe the conversion of traditional markets into modernized outlets. They show how upgrading an existing everyday shopping location can result in the unintended consequent of moving food shopping toward the poorly controlled and unhygienic street vending. Once it became clear that the previous regular consumers stayed away from the newly constructed premises, the vendors from other markets scheduled for renovation started a massive protest and challenged the plans.[4]

Case 1: Upgrading a traditional market into a modernized market within a shopping mall

An example of the modernization efforts of the HPC is the reconstruction of the traditional market Hang Da, located in the downtown tourist and commercial city center of Hanoi. In 2008 this traditional, covered open-air market was demolished and replaced by a modern shopping center. In 2010 the reconstruction was completed and the traditional market was reinstalled in the air-conditioned basement of the building. Table 5 presents an overview of the market before and after the reconstruction.

Authorities and investors proudly depicted Hang Da as *'the first traditional market changed to a modern market.'*[5] Retailers at Hang Da market, however, viewed the modernization in a less positive light. During interviews they stated that their sales in the newly constructed air-conditioned market in the basement of Hang Da Shopping center went down by $\sim$30% compared to before the renovation. A shift was also noticed in the clientele; from private consumers to professional hotel and restaurant buyers. Whereas the original unhygienic, hot and humid market used to buzz with activity, the reconstructed air-conditioned premises with appropriate hygiene facilities[6] miss out on any purchasing activity. According to the vendors, consumers refrained from using the newly renovated market because they preferred the easily accessible street markets in the neighborhood that emerged during the period of construction when the market was non-operational. During construction, street vendors seized the opportunity of selling vegetables in the surrounding area, capitalizing on the unmet demand of the old Hang Da clientele. When the market reopened most consumers didn't return. The vendors complained that they bought their space at the newly renovated market for high prices. They made that decision before the market was constructed and are now unable to sell their shop for the same amount due to a lack of customers.

The targeted consumers either are unaware of the presence of the market in the luxury fashion mall or complain about its accessibility: *'I didn't know there is a market downstairs inside; I thought this mall is only about designer brands'* (interview #6). *'I used to just walk in, look at this building, this is not for me'* (interview #9). *'I used to shop at the market, but now even if I want to, I can't shop here anymore because of the stairs. I was lucky to find a good vendor here in this street'* (interview #7).

Case 2: Transforming a traditional market into a supermarket within an office building

Another example is how the traditional open-air market Cua Nam was rebuilt in a high-rise office building with an open-air supermarket in the basement. Despite its vocal advertising of the availability of safe and clean foods[7], mainly vegetables (see Table 6), the supermarket failed to attract consumers. The supermarket has remained deserted since its opening in 2010. At the start the supermarket offered a limited assortment of certified safe vegetables. The lack of customers resulted in empty vegetable shelves since 2012 and finally the closedown of the supermarket in 2014.

An important reason for the non-adoption of this channel is that during the construction (2008–2010) shoppers shifted to alternative shopping locations, mostly turning to street market shopping. Further, during interviews with residents close to the market, people complained about the lack of freshness, the lack of assortment and most importantly the closed off and unwelcome atmosphere of the market: *'The market is hidden away in the basement and with the*

[4] On 28 May 2012, 500 small businesses (wet-market retailers) protested against the 'renovation' of the traditional wet market Ngia.

[5] http://www.vir.com.vn/news/en/corporate/savills-vietnam-agent-for-hang-da-shopping-centre.html (last accessed 15.07.2014).

[6] The new facilities provide tap water and adequate waste and waste water systems.

[7] Billboards placed both inside and outside declare 'Thực phẩm sạch an toàn' [clean and safe fresh foods] and 'Cho rau xanh an toàn' [market for safe vegetables].

Table 5
Illustration of the Hang Da metamorphosis 2008–2014. *Source:* Pictures taken by Sigrid Wertheim-Heck in 2008, 2012 and 2014.

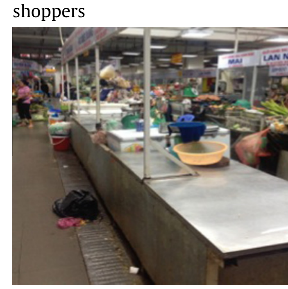
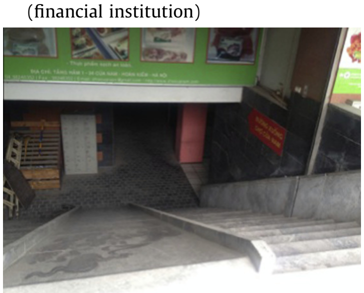
March, 2008 (before reconstruction)	May, 2012 (1,5 year after re-opening)	May 2014 (2,5 year after re-opening)
Market at street level	Market in basement	Shopping in the street in front of the entrance
		
Wide assortment under dirty and hot conditions and Buzzing with shoppers	Wide assortment under clean, neat and airconned conditions Lacking shoppers	Many empty/closed stalls No shoppers
		

Table 6
Illustration of Cua Nam anno May 2014. *Source:* Pictures taken by Sigrid Wertheim-Heck, May 2014.

Location and access	Food safety proposition	
Located in the basement of an office building (financial institution)	Cho rau xanh an toàn – market for safe vegetables Thực phẩm sạch an toàn – clean and safe fresh foods	Inside deserted and mostly empty shelves
		

guards and everything, not really welcoming' (interview #1). *'The market doesn't seem to be built for us, shoppers, but just for realizing office space'* (interview #3).

'I used to buy at Cua Nam market, but now I buy from a vendor in my street. I visited the new market when it opened, but it is very inconvenient with stairs going down a basement and the offer is not much and not fresh. I was disappointed. I'd rather buy from my regular vendor' (interview #2). The new 'market' did not succeed at preserving the most prominent characteristic of markets, namely the personal relations with individual vendors. Instead, it offered abstract food safety guarantees through an anonymous supermarket style vending structure: *'I feel the eyes of the guards in my back when I walk around and there is no one to advise me in the produce selection'* (interview #1). *'The cashiers there know nothing about the products'* (interview #3).

The next two case studies portray how similar supermarket development can yield dissimilar outcomes within different urbanization contexts.

Case 3: Installing supermarkets in a newly developed suburban area

A clear example of the effectuation of the modernization policy of the HPC is the rapid urbanization of the district Ha Dong, where skyscrapers, wide roads and flyovers increasingly dominate the previously rural landscape. Urban planning in this district does not include fresh markets but instead provides for large-scale supermarkets only. The two large supermarkets that opened up in 2010 were mostly empty during our visits in 2012, particularly during weekdays: at 8:30 am the supermarkets were empty and deserted, while a nearby informal but tolerated market was crowded. Supermarkets (if visited at all) are more of a weekend outing. In the weekends families go out to the larger shopping centers, combining actual shopping with window shopping, eating out and visiting amusement arcades. Although presented in urban planning and modernization policies as an alternative, consumers don't appear to recognize supermarkets in this area as a choice in daily vegetable shopping. *'Sometimes we go to there in the weekends to have lunch. The kids like the food and the playground. Than we also go shopping there. It is nice and interesting. There is a lot on offer [referring to processed foods and non-foods mostly]... but I doubt if the vegetables are fresh' (interview #12).*

An important explanation for the limited adoption of supermarkets in this area seems to be the combination of historical connections of the residents with production, the proximity of peri-urban vegetable production areas, and the persistent preference for everyday fresh purchasing.[8] Most households in the area still have strong connections with the nearby countryside. Supermarkets in this neighborhood are not able to compete with the fresh, convenient, daily offer of farmer vendors who provide first-hand personalized food safety guarantees. *'Some months ago, I moved to this area. Before I had my regular vendor, but also here I searched for a good vendor and was lucky to find my new vendor. She advises me on what is safe and fresh to buy'* (interview #11). *'I know the vendor here as she is a farmer from my home village'* (interview #12).

Case 4: Embedding supermarket in downtown residential apartment complex

For middle income, nuclear families, residential apartment complexes are being constructed. In 2013, a new supermarket chain opened a store on the ground floor of an apartment building, providing convenient access to daily foods and successfully attracting daily shoppers. During multiple visits, we observed that the supermarket was buzzing with activity. Shoppers are mostly young urban families, both men and women with small children, and many are wearing smart-casual dress, which indicates office jobs. The consumers shopping at this supermarket are mainly daily or regular shoppers living in or near the building.

The adoption of this supermarket in the daily shopping routine appears to be facilitated by: (1) new apartment complex residents immediately being provided with a convenient alternative when they move into the building and have to re-establish their shopping routines; (2) the need for convenience in the busy lifestyles of the residents in the building coming from young, nuclear families that need to combine work with household chores, like daily food shopping; (3) the presence of a large group of middle-income customers (non-residents) for whom shopping in supermarkets is both easily accessible (for instance on the way from home to work) and aspirational (fitting modern urban lifestyle). In this supermarket at least 50% of the floor space is allocated to fresh foods and around 30% of the total floor space is dedicated to fruits and vegetables, with a prominent focus on fresh vegetables with food safety guarantees in the form of labels, certification and brands.

'I come here every day, I worry about food safety, but here it is easy to find safe products' (interview #13). *'I like shopping here when I am all dressed up like this for work. Markets are too dirty, and I don't have the time to get redressed'* (interview #15).

Case 5: Establishing a chain of convenience stores

In 2008, a state-owned company was made responsible for the realization of safe vegetable provisioning across the city of Hanoi with a target of having one to three shops per district by 2015. Despite the dedication and enthusiasm expressed by the management about this undertaking during an interview in 2009, safe vegetables are not a prominent feature today. Our 2012 field study revealed that a network of stores was established across all 10 urban districts of Hanoi, but interviews with store managers revealed that vegetables are not selling well. Some said that they almost stopped selling vegetables, but since they are obliged to keep it in their portfolio they try to keep their portfolio as small as possible. According to the store managers, consumers are not interested in buying vegetables in their store, so they provide only a minimum assortment of produce (vegetables with longer shelf life like roots and tubers are preferred over easily perishable leafy vegetables). Repeated store checks confirmed this situation; we did not encounter any customer who purchased vegetables.

This outcome might be explained by the fact that several of the shops are located in the vicinity (or even inside) a wet market or in more commercial rather than residential areas. According to the survey and to the interviewed shop managers, consumers who buy vegetables at these shops, do so because of the food safety proposition. However, the stores are mostly frequented by non-vegetable shoppers on their way back from the traditional market, who are looking to purchase processed products like cooking oil, fish sauce, noodles and biscuits: *'At 7:50 I went to the market near my home.'* [After doing the shopping for vegetables and meat,] *'At 8:05 I went quickly to a grocery* [convenience] *store to buy a bottle of fish sauce and went home'* (Shopping journal #11).

Fieldwork and interviews with shop managers revealed that convenience store shopping is complementary to market shopping. At markets consumers buy entire meals including fish and meat on a daily basis, whereas convenience stores are frequented more irregularly and mainly for processed foods. According to the store managers, convenience stores can replace existing wet market routines for those with strong vegetable food safety concerns, but otherwise they are not regarded as a fresh, daily shopping alternative. The convenience stores are unable to attract daily vegetable shoppers based on their offer of formally certified safe vegetables. Their vegetables sales remain limited to occasional buyers.

On the basis of these five case studies we have revealed that the outcome of the policy and the dominant supermarketization model can result in alienation (case 1, 2 and 3) or (partial) adoption (case 4 and 5) depending on context conditions. Cases 1 and 2 represent a conversion of a traditional market into a modernized alternative, and demonstrate re-routinization into a contested alternative and alienation from the modernized vegetable retail space. First, the reconstruction of the markets entailed a disruption of established practices, forcing shoppers toward the readily available street markets. Second, when they reopened, the new markets were too different in many essential elements from the previous versions and were not able to provide a practically accessible and recognizable daily shopping option. Case 3 and 4 depict how the outcome of a similar supermarket intervention can yield contrasting outcomes, and may successfully attract daily shoppers (case 3) or may become excluding (case 4), when interventions do (not) accommodate for differences in shopper population and do (not) adapt to variations in the urban conditions. The last case (5) illustrates how formal food safety guarantees, like certification, are not enough to attract daily shoppers, when it requires a break with established practices. The cases explain how natural, policy-induced experiments do or do not fit into the daily routines of different groups of consumers. The evidence from these cases contradicts the core assumption underlying retail modernization policy, namely that consumers will modify their daily practices and opt for supermarkets as a response to food safety concerns and the growing aspiration for modern lifestyles.

Analysis: What works, for whom, and under which conditions?

Linking the intervention model to specific users and conditions enables us to discuss answers to the question why retail modernization is or is not able to reconfigure the relationship between buyers and suppliers of food in a transforming Asian city. When assessing the viability of supermarketization models based on degree of citizen consumer inclusion, our survey learned that the dominant policy model excludes a large part of Hanoi's urban population. However, exclusion is not a necessary outcome under all circumstances. Our cases show interventions that vary in degree of social inclusion and reveal how the effectuation of the model is contingent on differences in shopper population and variations in the urban conditions.

[8] Most people living in this newly developed suburban area are the previous inhabitants, villagers deprived of their land in the process of urbanization. An example for this type of development from a similar area can be found in the East Asian Development Network report (Nguyen, 2009).

Table 7
Taxonomy of patterns in supermarket adoption in the purchase of daily vegetables.

For whom does it work under what conditions?	
For young urban nuclear families:	Under the conditions that the supermarket:
• With both husband and wife working • Of middle and higher income classes and with higher education level • With limited practical connection with country side • Living in down-town residential apartment complexes • Aspiring modern lifestyles • For whom time is scarce • Who can afford to shop less frequent, larger volumes (in terms of budget, transport and at home storage capacity) • Who do not have a readily established practice of everyday fresh shopping	• Offers a broad assortment of F&V and other fresh foods • Fosters trust through retail company reputation • Provides easy recognizable food safety guarantees on product level (labels, certificates, brands) • Is located within or very nearby mid- and upper-income class residential apartment complexes • Provides easy access • Offers an immediate alternative when previous practices are disrupted • Provides for clean and neat air conditioned premises for smartly dressed office workers
For whom does it NOT work under what conditions?	
For lower income, lower education households:	Under the condition that:
• Receiving irregular income that necessitate daily food budgeting and thus daily food shopping • Being extended families in which older household members are responsible for household tasks • Having established shopping practices and vendor relations • Preferring personalized food safety assurance, preferably first hand producer/vendor information • Lacking transportation means, and storage capacity for purchasing further away larger volumes • Living nearby or have close ties with rural production areas	• There is a time lapse between enforced de- and aimed for re-routinization • The modern(ized) outlet is far from home • A nearby (street market) alternative is available • Access to the modern(ized) outlet is inconvenient in terms of stairs, closed doors, parking • That only a limited assortment of vegetables is on offer • The modern(ized) outlet is located in the vicinity of a vegetable production area • The modern(ized) outlet misses the personal touch of a friendly encounter, personalized advice and added value services

When shoppers have well-established daily shopping practices, radical interventions are less likely to fit within their everyday routines. In contrast, when shoppers do not yet have well- established shopping routines and a convenient modern alternative is made available, the modern format is more likely to be adopted. By categorizing our field data and linking these to shopper lifestyles, we were able to establish the following patterns that help to explain the outcomes of the retail modernization policies to date (Table 7).

Modernized versions of traditional markets failed to recapture their old position as the dominant urban retail channel. Although newly constructed markets are air-conditioned and more hygienic, they do not provide the welcoming and convenient open structure valued and needed by a large group of daily shoppers. The disruption of long established practices drives people to establish a new habit similar to their old behavior at the next easily accessible opportunity (i.e. street markets), instead of pushing them into new routines at the modern outlets. Important lifestyle characteristics are the daily food budgeting and extended households in which older people are responsible for household tasks. On the other hand, young, nuclear urban families do eagerly adopt supermarket shopping under the right conditions. They tend to live busy lives and have to combine careers with household tasks. They have not yet established daily food purchasing routines, have an aspirational modern lifestyle and are looking for clean, safe and convenient shopping opportunities. Clearly practices are shifting, but the pace and direction might be different than aspired by policymakers.

Conclusions and discussion

Lessons learned

Our paper shows that in the non-Western developing economy of Vietnam, and especially in the transformative context of urban Hanoi, the current retail modernization model might lead to exclusion of a large portion of the population. This may change in due time, as suggested by theories on patterns of supermarket diffusion in developing economies (Reardon et al., 2003). However, this study of vegetable shopping practices in Hanoi warns against making food safety policy strongly dependent on a single supermarket model; unintentionally it may result in some groups being deprived from access to healthy foods. Social deprivation is a phenomenon not restricted to the transformative retail context of Vietnam or SEA; it is also observed within more developed Western societies as a consequence of ongoing retail concentration (Blanchard and Matthews, 2007; Guy et al., 2004; Wrigley, 2002). Furthermore, examples of lagging fresh vegetables sales in supermarkets in more developed Asian retail environments, like Hong Kong, indicate that supermarket adoption is not only driven by the provision of supermarkets, but is contingent on the choices different social groups make about where and how to shop. In addition, in Vietnam, retailing is largely defined by public policies. Modern retail formats are predominantly state-owned, and government planning determines the siting of supermarkets.

Our findings show the importance for Vietnamese policymakers to consider the risk of social deprivation and to explicitly reflect on the unanticipated consequences of the normative direction of their interventions in food provision. Official documents (laws and regulations and Hanoi development plans) give the impression that the route to modernization has not been debated much. The retail modernization strategy seems to be designed with a Western landscape in mind, in which supermarket development appears as the natural direction. Retail modernization policy is portrayed rather one-dimensional and unambiguously western conflated. However, recently hands-on Vietnam policymakers have become more reflexive on their modernization strategies, which can be concluded from the delay and hesitance in approving the Hanoi trade development plan (MoIT, 2009) by the Hanoi People's Committee. When striving to improve food safety conditions of everyday fresh food retailing, policymakers cannot only rely on the Western ideal of supermarket development.

The different examples of failing, emerging and incremental market transformations help to reflect and modify these policy-induced interventions to allow for a broader societal inclusion. Although ideal-type supermarket development is welcomed and perceived as relatively safe, our in-depth case studies demonstrate how and why modernized outlets are not practically embraced by all citizens under all circumstances within the transformative context of urban Hanoi. Thereby, the impact on improving food safety is also very limited. The case studies outline how authorities already show appreciative inquiry with retail modernization models, like the variations in wet market conversion as described in case 1 and 2, however without the intended impact. No one denies the problems policymakers face in striving for social betterment. On the contrary, their quest is a good reason to proactively work on more effective and inclusive policies.

Implications for policy

Acknowledging the complex tasks and ambitions of policymakers, we do not pretend to know the solutions, yet with this paper we aim to contribute to the development of more inclusive retail modernization policies. Our study identifies two main approaches that can make safe food policies more effective: (1) recognizing the variation in daily consumer practices in order to include more social groups, and (2) building on incremental and emerging market transformations in order to compose a flexible portfolio of intervention strategies, which does not necessarily entail a radical transformation of the retail landscape.

Concerning the first topic, our paper indicates that reaching a more diverse population within the transformative context of a developing economy requires more flexible policies that allow for malleability in response to local conditions. Whereas policy to date appears aimed at changing consumer behavior, policymakers should rather seek to adapt modernization models to established daily practices, as it is this fit that determines the level of adoption. Our research indicates that when the transformation includes too many changes in established practices at once, or does not take into account the specific lifestyle routines of consumers, the process may unintentionally result in social exclusion of some groups. In this scenario, the modernization of food retail alienates rather than attracts everyday consumers. Understanding 'real world' mechanisms of routinization as well as practical and emotional recognition, ranging from physical access and assortment to awareness and attraction, might enable policymakers to create a more varied offer in retail modernization models than the current dominant ideal-type, Western-style supermarket. In striving for social betterment, we argue, policymakers could benefit from more reflexive modernization strategies (Beck, 1992).

Regarding the second issue, the paper favors the development of a portfolio of flexible – locally sensitive and malleable – policies tailored to the daily lives and practices of different types of consumers. Policymakers would benefit from understanding the policy operationalization challenges under specific conditions. Our analysis argues in favor of developing policies that not only focus on organizational fixes as end goals but also allow incremental adjustments to specific circumstances. More flexible policies strive to embed a mixture of public and private interventions in the local food culture of daily food budgeting, freshness focus and desired variation. They balance between abstract and personalized food safety guidance systems and vending structures. This approach accommodates amelioration in food provision not only in the longer term, but also addresses the immediate food safety problems in the everyday lives of urban populations. A potential way to design such policies could be through the generation of inputs by the wider community, like citizen juries. Deliberately engaging citizens in public policy design could help policymakers to become more receptive to locally embedded food practices and the associated rules and routines for managing risk and uncertainties. This can make them better equipped for using public regulations and resources in developing customized solutions in addressing food safety problems.

Implication for further research

In this paper, we look for a way to re-conceptualize the retail modernization intervention model, in order to make it amenable to the transformative context of Vietnams' capital Hanoi. We argue that our practice-oriented and realist approach is relevant beyond the Vietnam case. It emphasizes that one needs to start from what works in practice and to ask for whom it works. For future policy-oriented research, it would be beneficial to also study emerging retail alternatives in detail. During our research we observed a steady increase in 'safe vegetable' shops, an advancement in telephone and online 'safe vegetable' ordering services, and the spontaneous organization of 'organic' and safe produce farmers market within local communes (variation of communal street-market in which organic farmer vendors get together to sell their produce). Potential examples from surrounding countries include mobile grocery stores, like the vegetable vending trucks that drive through suburban residential areas in the Philippines and Thailand, or farmer's markets on the ground floor of suburban residential apartment buildings in China. These are mostly still niche alternatives. Understanding how such bottom-up initiatives work in practice further informs the policymakers' effort to designing more socially inclusive strategies for improving food safety in retail. For Vietnam innovative variations on established retail formats and shopping routines could include the conversion of informal street markets into more organized and controlled drive-through food markets. This innovation could maintain the convenience and individual vendor structure of outdoor wet markets, while providing affordable access to a controlled offer of safe, fresh and healthy produce.

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