



Food safety in everyday life: Shopping for vegetables in a rural city in Vietnam



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A B S T R A C T

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Concerns about food safety influence the way in which Vietnamese consumers confront the question of where, how and from whom they buy their fresh vegetables. In this paper we analyze in what manner and to what extent existing shopping practices inhibit the adoption of modern retail based food safety strategies. Using a social practices theory based approach, we analyze in detail the sales practices of sellers and the purchasing practices of consumers in a Vietnamese provincial city. This study reveals how both sellers and buyers in wet-markets, Asian style fresh food markets, apply different sets of skills and knowledge, based on locality, personal contacts and private judgment, to match supply and demand in the context of food safety threats. Within the everyday practice of shopping for vegetables, trust is shown to be continuously reproduced along pre-given lines. Consumers do not easily look outside or move beyond their existing routines even when food safety concerns would urge them to do so. From these findings we conclude that in situations where wet-markets serve as the dominant channel for distributing and purchasing fresh food, the efficacy of government and retail induced food safety strategies depends on their articulation within existing food purchasing routines of Vietnamese consumers.

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1. Introduction

Food safety is a major social and political issue in Vietnam. Over the last decade, there has been an alarming increase in the inappropriate use of chemicals in agriculture (Van Hoi et al., 2009). This has resulted in a stream of food safety incidents, which are widely covered in the public media (Moustier et al., 2002; Hoang and Nakayasu, 2006).¹ Subsequently, Vietnamese consumers are anxious about the safety of the vegetables they consume on a daily basis, in particular with respect to the residues of agro-chemicals

(Figuié et al., 2004; Mergenthaler et al., 2006, 2009). To improve food safety and to restore trust among consumers, authorities in Vietnam promulgate policies that focus on the modernization of the food retail system (Moustier, 2006; Maruyama and Trung, 2007). Government authorities actively discourage wet-market retailing (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), while stimulating the development of modern supermarkets (Geertman, 2011), thus facilitating the establishment of consumer guidance systems like certification and labeling (Reardon et al., 2003; Gulati et al., 2005). However, despite ubiquitous food safety concerns among the general public and sustained policy interventions favoring super- and hyper-market development, the less regulated and less hygienic wet-markets remain the main shopping channel for fresh produce in Vietnam (Shepherd and Tam, 2008; Cadilhon et al., 2006; Maruyama and Trung, 2007).

The persistent dominance of wet-markets provides the context of our present study, which aims to investigate how Vietnamese citizens in their everyday lives are confronting the health risks and other side effects related to the consumption of fresh vegetables. By

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¹ Example: In July 2013, online newspaper Dantri reports on the 9th that increasing amounts of vegetables containing harmful chemicals are detected (<http://dantri.com.vn/suc-khoe/phat-hien-them-nhieu-mau-rau-nhiem-hoa-chat-doc-hai-752303.htm> – last accessed January 6, 2014), followed by another article the same month, on the 21st, that nearly 80% of the vegetable samples contain harmful agro-chemicals (<http://dantri.com.vn/suc-khoe/80-mau-rau-ngot-tam-thuoc-doc-757198.htm> – last accessed January 6, 2014).

applying a social practices approach, we are able to document the basis of the continued reproduction of trust in fresh food. This basis is to be found – so we argue – in the wet-markets as locale and setting for the daily routines of selling and buying fresh food. By providing a situated, in depth (micro) analysis of the everyday practices of ‘buying and selling fresh vegetables at the wet market’ we add to the existing body of predominantly (macro) institutional studies of food safety governance and retail modernization. Findings from our study contribute to the design of more effective vegetable retail modernization strategies in Vietnam and the broader Asian context.

1.1. Outline of the argument

We shortly introduce the social practice approach in Section 2. After a discussion of the research design and the applied methodologies (Section 3) we present the empirical results in Section 4. This empirical section pays attention to both the different types of sellers of vegetables and their strategies with regard to vegetable safety risks as well as to consumers and their ways of confronting food safety risks in everyday life. In Section 5 we provide a discussion of our main findings while exploring their relevance for food safety policies in Vietnam.

2. The social practices approach to consumption

The persistent dominance of wet-market retailing in providing vegetables indicates that the practice of buying and selling fresh vegetables is not simply shaped or dictated by institutional transformations within the overall system of food provision. For this reason we argue that the institutional governance approach, which implicitly privileges the agency of producers and value chains over the agency and power of consumers (Goodman and DuPuis, 2002), needs to be complemented with a consumption perspective that puts agency center stage. The consumption perspective used in most studies on agro-food networks tends to emphasize deliberate and conscious choice-making from the side of consumers (Goldman et al., 2002). This is not just the case in traditional marketing studies (Frewer and Van Trijp, 2007), but also in studies on the development of alternative food networks. In the latter kind of value-laden approaches to consumption behavior, citizen-consumers are assigned an active and positive role in the (re) shaping of agro-food networks (Lockie and Kitto, 2000; Hendrickson and Heffernan, 2002; Sage, 2003; DuPuis and Goodman, 2005; Little et al., 2009). Also in the tradition of political consumerism (Micheletti, 2003) the active and transformative role of consumers is taken as a starting point for the analysis of social change in (food) systems.

In this paper we build on sociological studies on consumption, which emphasize the need to analyze consumption behavior not in terms of individual, rational decision-making, but rather as the shared, routinized, and taken for granted practices of groups of food consumers (Schatzki et al., 2001; Warde, 2005; Shove, 2010; Shove et al., 2012; Spaargaren et al., 2012). Using an approach based on sociological theories of consumption, we thus explore a middle ground in between models that mainly regard consumption as the outcome of provision – like super-marketization and third-party auditing – on the one hand and models that emphasize or even prioritize the agency of individual consumers based on purposeful behavior – as in marketing studies and some studies on alternative food networks – on the other. Analyzing consumption in terms of social practices means treating concepts such as consumer perceptions, skills, and knowledge not just as categories that belong to individuals but also as concepts that can be meaningfully related to and explained with the help of the practices that are being

performed (Spaargaren, 2003, 2011; Fonte, 2008; Journal of Consumer Culture, 2011). Our sociological model emphasizes the situated and routinized character of the (shopping) behavior of (food) consumers (Warde and Southerton, 2012). Continuity and change of daily routines cannot be predicted from individual perceptions, opinions and behaviors of the participants to the practices. Well-established and cherished routines affect the nature of the performances displayed by actors in everyday life, often making the existing routines robust to change (Spaargaren et al., 2013) and their participants seemingly conservative (Heiskanen et al., 2007).

Fig. 1 displays our conceptual model, with the practice of ‘shopping at wet-markets’ being put in the center of the analytical attention. The practice can be approached from two analytical angles. When analyzing the ways in which the practice is performed by different groups of actors with specific lifestyles, the emphasis is on the ‘agency implied in the practice’. When analyzing the ways in which the practice is embedded in wider food chains and relevant (policy) networks – the so-called systems of provision that are connected to the practice – the emphasis is on the institutional dimension of the practice. When discussing the embedding of the practice in systems of provision, we emphasize the nature of the practice as being a ‘consumption junction’: a place and time where system rationalities meet life-world rationalities (Schwartz-Cowan, 1987; Fine, 2002). In short: performances of actors at vegetable consumption junctions are regarded of key importance when understanding the ways in which food-risk issues are confronted and dealt with both at the personal and the systemic level.

Applying a social practices approach to the management of food-risks and anxieties in the context of wet-markets is innovative for different reasons. First, research on food practices beyond OECD countries (Oosterveer et al., 2007; Kantamaturapoj et al., 2013) to date focuses mainly on supermarkets (Hong Nguyen et al., 2013), while wet-markets thus far dominate vegetable selling and buying not only in Vietnam, but also in wider South-East Asia (Humphrey, 2007). Second, when shifting analytical attention from supermarkets to wet-markets, also the available repertoires for the management of food risks turn out to be crucially different. Instead of the objectified information on food safety as exemplified by labels and certification systems in supermarkets, wet-markets are characterized by personal, face-to-face mechanisms and relationships, which form the basis for sustaining trust in food.

Our in-depth investigation of the social practices of buying and selling fresh vegetables at wet-markets in Vietnam aims to explore the taken for granted strategies that actors apply when confronting food safety risks. In normal situations, so we argue, trust in food results from the co-production of both salesmen and consumers during everyday interaction. When practices are de-routinized however, as in the case of food scandals or other ‘fatal moments’ in food provision (Beck, 2006), the basis of trust becomes subject to discussion and conscious (re)considerations. De-routinization can result from sudden changes but as well from orchestrated changes in the practice, for example when wet-markets are (temporarily) displaced in order to enforce the shift to shopping in ‘safe’ supermarkets (Vittersø et al., 2005). In both cases, the existing routine interactions between sellers and buyers at pre-determined spaces and times fall into crisis, become at least temporarily obsolete, and start going through processes of change and reconsolidation (Brunori et al., 2012).

Since food crises and scandals in the Asian contexts are such regular events and since national food-safety policies aim to facilitate the shift to shopping in supermarkets, the continued popularity of wet-markets, at first sight, seems a puzzling phenomenon. Why stick to established routines when safer alternatives seem readily available? What characteristics of the practice of shopping at wet-markets may account for their continued reproduction

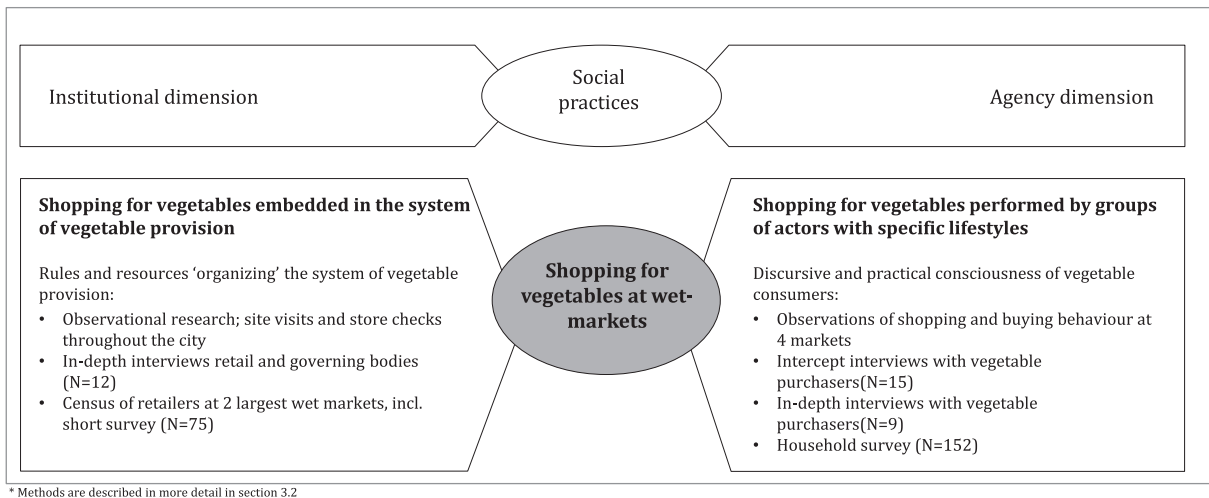


Fig. 1. Overview of conceptual approach and methods applied.

among Asian consumers in the light of consumer anxieties about food safety? These are the central questions that motivated our empirical research.

3. Research location and methods

3.1. Research location

The research was conducted in the period 2008–2010 in the city of Viet Tri, the capital, and only city of, Phu Tho Province in North Vietnam. Around 180,000 people, 40–45 percent of the total urban population of Phu Tho Province, live in Viet Tri (General Statistics Office, 2008). The city is situated about 85 km northwest of Vietnam's capital Hanoi. One main road links Viet Tri to its food supplying areas. Food is brought into the city from the west, Phu Tho Province, and most importantly from the east, Red River Delta, and places further away, like Dalat and China (routed through Hanoi). Our research concentrates on four central urban districts.

Viet Tri was considered to be a suitable study environment as its citizens increasingly depend on third parties for their daily food supplies. Agriculture accounts for less than 4% of the city economy compared to industry and construction accounting for around 60% and services contributing around 36%. Towards the periphery of the city, in the rural communes, people still work on agricultural plots. According to local authorities (interview with two representatives of the Phu Tho Province Department of Agriculture and Rural Development (PhuThoDARD), 2009), the vegetable production within the city boundaries meets less than fifty percent of the total city demand. Further, being exposed to nationwide mass media reports on food safety incidences, Viet Tri consumers have to deal with their food safety concerns in a setting where wet-markets are the dominant sites for vegetable retailing. At the time of our research, policy interventions like the enforced modernization of wet-markets and the development of supermarkets did not yet show significant effects.

3.2. Methods

By focusing on interactions at the Viet Tri consumption junctions for vegetable food selling and buying, our methodological orientation fits into the social practices approach to consumption (Halkier and Jensen, 2011; Spaargaren, 2011). We used both qualitative and quantitative research methods to gather data on the processes happening at the vegetable consumption junctions. We

used methods that provide direct access to the interactions happening at the consumption junctions (observational research) as well as methods that generate accounts or expressions of action and interaction (survey, intercept- and in-depth interviews).

To map the vegetable system of provision, institutional dimension Fig. 1, the research started with store checks and site visits combined with short intercept interviews throughout the city to obtain a basic impression of the geographical sales locations, the type of retailing present and the vegetable assortments offered. To assess vegetable sourcing and sales practices, in-depth interviews (using a semi-structured guideline) were conducted with eight wet-market retailers, three street-vendors and a manager of a shop selling vegetables with food safety certification. To understand the main retail structure in the city, the policy in safe vegetable provisioning and the operational food safety controls, expert interviews (using a semi-structured questionnaire) were conducted with the management board of the four largest wet-markets within Viet Tri city, as well as with representatives of three local government institutions (Provincial Agricultural Department, the city Economic Department and the Provincial Plant Protection Department). To assess the assortment, volume and origin of the vegetables offered, a vegetable retail 'census' (using a short structured questionnaire) was conducted at two out-of the four largest wet-markets in Viet Tri, collecting data from 75 vegetable retailers.

To map the consumer related inputs into consumption junction processes, agency dimension Fig. 1, the research started with observations of shopping and buying behavior across the four largest wet-markets in Viet Tri. This was followed up with intercept interviews on the spot and at the moment of purchase to assess consumer considerations with respect to vendor and product selection. For in-depth information about vegetable purchasing and the underlying rationales with regard to food safety, nine in-depth interviews were conducted with daily vegetable purchasers. To characterize the population being researched as well as to 'validate' the qualitative information collected we conducted a survey of 152 randomly selected households across four central urban districts of Viet Tri city. The survey assessed purchasing behavior, urgency and nature of food safety concerns, safe vegetable shopping preferences and trust in safe vegetable guarantee systems. Respondents were the people mainly responsible for daily food shopping within the household and households were included that did not receive income from agricultural production (only one household needed to be excluded).

In accordance with the theoretical approach described above, most of our empirical research focused on the everyday practice of

buying and selling fresh vegetables at wet-markets. Interactions and social relations at the wet-markets are taken as a starting point for describing and further exploring trust in the safety of vegetable food and in the risk reducing strategies employed by both sellers and buyers of vegetables.

4. Fresh vegetables and trust in food safety: empirical results

This chapter reports on the empirical results of our research at wet-markets in Viet Tri. We report separately for the two main categories of actors operating at the vegetable markets: vendors and salespersons on the one hand (4.3) and citizen-consumers (4.4) on the other. Before we portray the wet-market practice and their key-actors, we first present a review of the risk-awareness and food-safety concerns among the general populace (4.1) and shortly describe the overall situation of vegetable provision in Viet Tri (4.2).

4.1. Food safety concerns among Vietnamese consumers

Both intercept interviews conducted with consumers at wet-markets and the household survey revealed that food safety is the primary concern for consumers when buying vegetables. Their main fears relate to the health risks stemming from the use of agro-chemicals (Tables 1–3), which pertain to the use of fertilizers, pesticides and preservatives.

Although bacterial contamination is reported to be important causes of foodborne diseases (Shepherd and Tam, 2008), interviews with consumers in Viet Tri revealed that they believe they are generally able to avoid these risks, but lack the appropriate means of control with regard to the residues of agro-chemicals:

“I usually improve the situation by soaking the vegetables in salted water, and clean very carefully before cooking.” (Interview #3) “The best solution is to wash and soak the vegetables carefully. But I know they still have a little of the pesticides.” (Interview #13).

In our household survey, 92.8% of the respondents reported they considered themselves to be at least partly able to clean vegetables enough to make them safe for consumption. When consumers in Viet Tri mention safe vegetables, they define safety in terms of personal benefits, like ‘not falling ill’, which has a variety of meanings. The household survey indicated that 81% is most concerned about longer-term health effects. However, when asked about their experiences with foodborne diseases, most consumers referred to short-term food incidents like stomachache, vomiting and diarrhea. Consumers who reported to have experienced foodborne illnesses within their household were less confident in their personal ability to select safe vegetables using their own skills and knowledge. Instead of selecting vegetables on the basis of their

Table 1
‘I see you just purchased vegetables: can you explain to me why you bought these vegetables?’

Rationale	Count	Quotes
Clean/pesticide free ^a	11 out of 15	I just bought spinach. I know that this is pesticide-free This morning glory looked clean and fresh
Taste	6 out of 15	I love this vegetables I want to have different kind of vegetables for different meals I am fed up with other kinds of vegetables

^a Consumers in Vietnam tend to interchange the concepts clean and safe. And although theoretically these concepts have a different meaning, previous research has indicated that consumers refer with both ‘clean’ and ‘safe’ to ‘without or with permitted level of residues of agro-chemicals. (Moustier et al., 2009; Figuié et al., 2004).

Source: Intercept interviews with consumers at the wet markets in Viet tri

Table 2
‘How do you define vegetable quality?’

Criteria	Count	Quotes
Agro-chemicals	15 out of 15	I think the vegetables, which have good quality, must be safe, no pesticides, no bad chemicals. I think good vegetables are those that are grown in clean condition and on which no nitrogen fertilizer is applied. I think good quality vegetables are not contaminated with pesticides or preservatives. These days a lot of people use growth-stimulants on vegetables. That’s so scary

Source: Intercept interviews with consumers at the wet markets in Viet Tri

Table 3
‘What do you think is the biggest potential danger in vegetable food safety?’

	Frequency	%
Chemical pesticides, growth enhancers and fertilizers	148	97.4
Soil and water conditions	1	.7
Contamination by bacteria	2	1.3
Hygiene practices in food preparation	1	.7
Total	152	100.0

Source: Household survey Viet Tri. In the survey this questions was also asked in the inverse style: “what is the smallest potential danger”. This delivered the same picture as presented in the present table.

external appearance, these consumers tend to put more trust in the expert systems behind certification (Table 4).

Overall, our household survey showed that 85% of the respondents do trust vegetables more when their quality is guaranteed by an official food safety certification by the Vietnam authorities. This certification means that the vegetables have been produced in accordance with national regulations, which address food safety primarily from a pest management perspective (MARD, 1998, 2007 and 2008). In this paper, the concept of ‘safe vegetables’ has a restricted meaning, referring to ‘compliance with rules and regulations regarding the application of agro-chemicals’.

During our research we identified one shop, centrally located at the main road of Viet Tri, selling vegetables with formal food safety certification (see also 4.3). But despite food safety concerns and expressed preference for vegetables with food safety certification the sales figures in this shop were reported to be low. Although respondents in our household survey indicated being interested in buying safe vegetables when available (63%: ‘yes sure’; and 37%: ‘yes maybe’) and preferring to shop at a dedicated safe vegetable outlet (78%), none of them could give a positive answer to the question: ‘Do you know a retail outlet that sells vegetables with food safety certification within Viet Tri?’ Consumers appear not to be engaged in an active search for alternatives that could guarantee food safety through certification measures. Given this apparent ‘value-action gap’ (Blake, 1999; Shove, 2010), we conducted in-depth empirical research into the practices of selling and buying fresh vegetables at wet-markets, the results of which are presented and discussed in the following sections.

4.2. Vegetable provision in Viet Tri

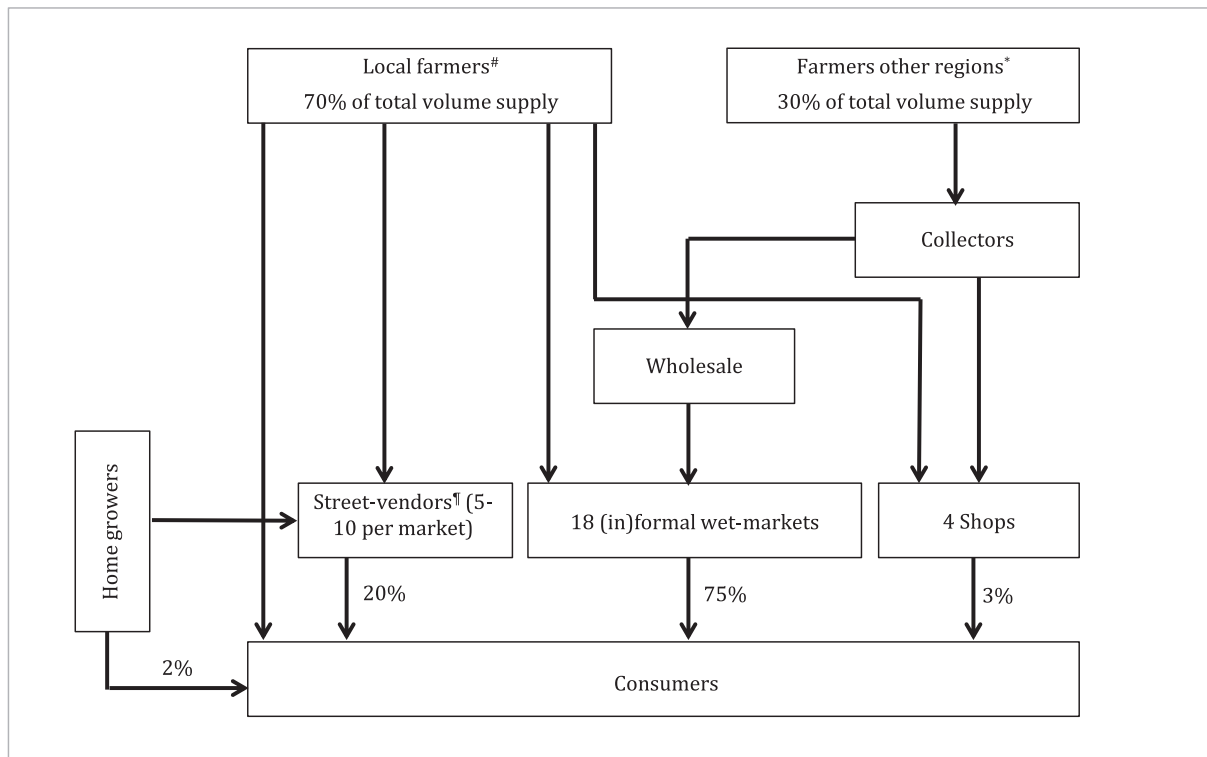
In assessing the main consumption junctions in Viet Tri and the food safety concerns at play, we combined observational research across four urban districts with interviews among vegetable sellers, vegetable buyers and provincial and city authorities figuring in the regulatory environment surrounding the wet-markets and the

Table 4

Relation between experienced illness due to consumption of vegetables and perceived trust in food safety indicators (based on anecdotal information).

			What makes you trust the safety of the vegetables the most?					
			External appearance	Certificate given by authority	Advertisement on TV/Newspapers	Advice from regular retailer	Advice from relatives/friends/neighbours	Information on producer and production area
Have you or your family ever been ill due to consumption of vegetables?	Yes	Count	10	25	0	1	2	6
		%	22.7%	56.8%	.0%	2.3%	4.5%	13.6%
	No	Count	53	34	3	0	8	8
		%	49.1%	31.5%	2.8%	.0%	7.4%	7.4%

Source: Household survey, N = 150



Local farmers - origin: Viet Tri city, broader Phu Tho Province and neighboring Vinh Phuc Province.

* Farmers other regions - origin: China, Dalat and Hanoi.

† Street-vendors in Viet Tri mostly operate within wet-market premises.

Fig. 2. Overview of Viet Tri vegetable provisioning to end-consumers with indicative volume share percentages.

Source: Interviews 2009; Percentages of volume market share are rough estimated calculations based on sales volume from interviews in 2009 and per capita vegetable consumption statistics of the General Statistics Office of Vietnam.

production of vegetables. Fig. 2 presents an overview of the system of vegetable provisioning to end-consumers in Viet Tri.

Vegetables are sold through different types of sales channels. Our research identified the following vegetable sales channels along the outlet specification as defined by Moustier et al. (2009): shops, formal and informal markets and mobile street-vendors. Four indoor shops (defined as shopping area of less than 500 m², with walls; Moustier et al., 2009) were identified: three shops (less than 60 m²) selling a limited amount of unlabeled fresh vegetables and one aforementioned shop (around 200 m²) selling certified safe vegetables. Modern supermarkets – defined as diversified stores with more than 500 m² characterized by self-service – were not present in Viet Tri city.

Wet-markets form the core of vegetable retailing in Viet Tri (Table 5) and include both formal and informal wet-markets. Formal wet-markets (covered or semi-covered) are planned by the state and governed by a management board. To be allowed to

vend in these markets, vendors have to pay a rental fee. Informal markets, in contrast, are not planned by the state and are held in the open air throughout the city. Informal markets include both semi-permanent markets and spontaneous markets. No formal rental fees apply in these markets and no official data are available on them. In their daily practices, consumers do not appear to make a clear distinction between the formal and the more permanent informal markets and, as such, the consumer survey sufficed with the notion of 'wet-market' only. At the time of research, nine formal wet-markets were operational in Viet Tri, and our study of daily purchasing practices was conducted at four of these.² Within the

² We did not include informal wet-markets in the observations. Informal vendors, indicated as street-vendors, operating within formal wet-market premises, however, were included (see 4.3.2).

Table 5
Importance of purchasing channels in frequency and average volume purchased per channel.

	Frequency (multiple answers possible)	Respondents % (multiple answers possible)	Average % of vegetables purchased per channel by respondents
Wet-market	140	92	60
Street-vendor	70	46	16
Friends	45	30	12
Backyard garden	27	18	8
Minimarket	19	12	4

Source: Household survey. Response to multiple answer question: 'Where do you buy what volume of your daily vegetables?' $N = 152$

Table 6
Traded volume and vegetable assortment in one formal wet-market.

Number of retailers interviewed	Description of retailers interviewed	Average traded volume (kg/day/retail)	Vegetable assortment on sale (count of different types)
6	All regular vendors with registered stall	1570	≥ 6
69	Mainly irregular vendors based on entrance fee	92	≤ 2

Source: Wet market 'census' research in formal wet-market Central Tien Cat; $N = 75$

wet-markets, we did not identify any 'safe vegetable stall', nor did we recognize any vegetables sold under food safety certification.

The vegetables offered within the wet-markets originate from different areas and types of farmers, ranging from far away and anonymous sources to backyard farming by residents within the city boundaries. Most vegetables originate from 'local' growers: small city farmers producing on small plots of land, and nearby farmers. Depending on the season, the quantities of vegetables originating from other regions might vary. These vegetables arrive at night at the local wholesale market, a square in the city center from where local wholesalers distribute the vegetables to the local retail.

Representatives of governmental institutions at provincial and city level indicated that they possessed only limited means to ensure the safety of the vegetables traded. Although the province has selected several areas for safe vegetable cultivation, the officials reported that as yet there exists no master plan for allocating specific areas to industries and to vegetable production. Besides, there is also no clear vision and plan for the establishment of a provincial wholesale market, an initiative that, according to the authorities interviewed, would greatly improve the control on food safety. At the time of the research, the Viet Tri Economic Department, operating at the city level, actively supported the development of so called collective communal home-grower initiatives. Local households received training in Integrated Pest Management (IPM). The economic department, however, has neither the means to certify the vegetables (certification is too complex and costly for small scale farming), nor the ability to assist the communes in vegetable retailing. As a result, the individual households end up selling their 'safe' vegetables without certification, labels and packaging as street-vendors.

4.3. Risk handling by key-providers at wet-markets: retailers and vendors

In this section, we focus on how retailers at wet-markets deal with food safety concerns. We also depict the role of the more informal street-vendors in vegetable provisioning, and, building on guided observations and in-depth interviews, we present the strategies, which retailers (4.3.1) and street vendors (4.3.2) deploy in order to deal with the safety risks of vegetables.

4.3.1. Retailers at wet-markets: risk assessment on the spot

At wet-markets, most retailers sell their produce without a registered stall. Although they mostly occupy the same spot at the

wet-market, they have no permanent business registration and pay a daily fee based on the value of the vegetables on sale. They offer a limited variety of vegetables and sell on average around 90 kg/day. The bigger retailers have a registered stall, permanent business registration with fixed monthly service fee, and trade broader assortments and larger volumes of on average 1500 kg/day (Table 6).

The retailers at wet-markets are the main link between the producers and the buyers of vegetables. They source their vegetables from various suppliers and production locations. All retailers indicated deciding what to buy from whom on a daily basis. Most retailers claimed to have at least one or two preferred sources. Supplier selection is based on the freshness of the produce offered, the consistency in volume supplies, and the oral confirmation from the supplier that the vegetables are safe. In general, retailers do not seem very much pre-occupied with price. All retailers stated that they are able to sell their vegetables well as long as the vegetables look fresh and not withered. No fixed contracts between farmers and retailers were reported, and retailers stated to often switch between suppliers. The main problem in the current vegetable supply, stated by all interviewees, is the lack of consistency in the volumes and quality of the vegetables offered.

During the interviews, retailers themselves did not spontaneously mention food safety as a consideration for what vegetables to source from whom and from where. However, after being at first reluctant to provide information, retailers became very talkative when the discussion moved from general business to food safety issues. At that point even neighboring retailers joined in. The safety of vegetables appeared of high concern, but retailers interviewed expressed a general feeling of powerlessness in terms of regulating food safety: "I'm very concerned about the safety of my vegetables, but what can I do? I don't have the means to check food safety." (Interview #16). None of the retailers interviewed reported being pro-active in realizing food safety. An illustrative response of a wet-market retailer:

"I cannot guarantee that the vegetables I sell are safe, but I still tell my customers that they are clean and safe because my suppliers say so and I haven't had any trouble thus far." (Interview #18).

Retailers primarily define food safety risks in terms of the excessive application of agrochemicals, while consumer demand appeared to be their prime motivation for engaging with food safety issues:

"I am very concerned about the safety of the vegetables I sell, because it is important for my customers." (Interview #18).

"I don't know any supplier in Viet Tri who provides safe vegetables but if there is any supplier who can supply safe vegetables

I'm willing to source from them. I think consumers will prefer safe vegetables over normal vegetables." (Interview #17).

In trying to regulate food safety, retailers rely on personal experience and expertise in supplier selection: "I can't be sure whether suppliers (mostly farmers) are honest or not, but I can only rely on their honesty." (Interview #18) Retailers tend to prefer suppliers with whom they maintain a longer-term relation and with whom they haven't experienced any complaints from consumers on food poisoning, stomachache, diarrhea and vomiting, thus far. Given aforementioned consumer' tendency to relate experienced foodborne illnesses to excessive agrochemical residues on the vegetables they consumed, they will blame the retailer for selling unsafe vegetables, even when consumers' own unhygienic food handling practices might have induced the health problem. Two interviewed retailers reported to be confronted with consumer complaints. As a consequence, both stated to have become reluctant in sourcing vegetables from unknown suppliers even when insufficient supplies of regular suppliers would urge them to do so.

The interviews and observations in the selected wet-markets show that retailers rely on the interactions with (shifting groups of) suppliers and on their personal skills in order to assess the potential threat of specific vegetable products to food safety. They rely on their senses (Beck et al., 1994) and do not use objectified checks and procedures for handling food risks. Past performance is important for (not) buying from suppliers. There is little interaction with colleagues or regulatory authorities on food risk and safety issues.

Mainly these retailers, with their specific strategies and (lack of) knowledge on food risks, enter into interactions with Vietnamese consumers purchasing their daily vegetables.

4.3.2. Street-vendors capturing the vacuum: first-hand risk assessment

Besides buying from retailers in formal and informal wet-markets, consumers also buy their vegetables from street-vendors, who continue to play an important role in the provision of many products, including fresh produce. Street-vendors tend to have a different attitude towards food safety. Vegetable street-vendors in Viet Tri are mainly backyard 'farmers', having their roots in either Viet Tri's rural communes or in neighboring villages. They sell approximately ten to fifteen kilogram of home-grown green leafy vegetables per day, usually handling only one or two types of vegetables carried on shoulder poles or on the back of a bicycle, serving about twenty to thirty end-consumers a day. The street-vendors interviewed are completely confident of the safety of their produce on sale: "I grow the produce myself; I don't use any chemicals, so I know it is safe." (Interview #19).

Where street-vendors in the major cities mostly sell along public roads, throughout Viet Tri city most street-vendors were observed in groups of five to ten women operating within the wet-market areas. According to the wet-market management, street-vendors increasingly sell within their formal wet-market premises. They are allowed to sell their produce at the wet-market after paying a daily-fee depending on the estimated value of their produce. This suggests that the street-vendors, mostly originating from poor rural communes, expect to sell better within wet-markets. The wet-market management reported that street-vendors gather at dedicated spots in the central market. Street-vendors thus establish 'new' collective sales points within the wet-market.

Unlike the regular retailers at wet-markets, the more informal street-vendors express absolute confidence in the safety of the vegetables they have on sale, although their verbal food safety confirmations are also not objectified or regulated by authorities.

With their 'first hand risk knowledge', the street-vendors assembled in wet-markets provide an alternative for consumers when purchasing vegetables. They represent a direct link to the farming plot and feel capable of ensuring the food safety of a limited assortment of vegetables.

4.4. Risk handling strategies of consumers buying at wet-markets

Having described the choice configurations offered at formal wet-markets and the food-safety strategies of the providers at these markets, this section focuses on the risk handling strategies of consumers purchasing vegetables at the wet-markets. Even though the practice of buying vegetables is routinized to a considerable extent, it is clear that enacting the practice involves a number of implicit and explicit decisions being made in a specific sequence and (priority) order. First, it is habitually decided at which site or location the shopping will take place, followed by the selection of the actual seller/provider of the vegetables, to be concluded, third, with the actual choice of the specific vegetable product to buy. We consider the purchasing practice from the perspective that, while consumers cannot influence the range of alternatives made available to them, they nevertheless have to make choices within the specific context of the wet-markets in Viet Tri (Pawson, 2000). Choice processes at wet-markets are largely pre-configured and this fact is taken for granted by most consumers most of the times. Furthermore, when stating that practices are routinized, we assume that many (food) choices are performed at the level of the 'practical consciousness' of consumers (Giddens, 1984).³ Consumers make most of their choices on the automatic pilot, acting 'like they always do'. Finally, it must be recognized that this 'acting as I always do' is not just an individual affair. Enacting the practice of purchasing the daily vegetables is done in a similar manner as all the other participants to the practice do: 'I act as the others do'.

It is against this background that we seek to offer a detailed description of the purchasing practices, while tracing and characterizing the kind of skills and knowledge mobilized by consumers when handling the multi-faceted threat of food safety. How exactly do Vietnamese consumers perform this daily practice? How do risks considerations (co)determine the kind of vegetables bought, the interactions being opened up with particular kind of providers and the places or consumption junctions being selected for shopping?

4.4.1. Where to buy?

Food safety concerns are not the principal factor determining the buying behaviors of Vietnamese wet-market visitors: the primary choice is about the selection of the preferred retail location. 75 percent of the respondents in the household survey indicated that choices for sites are convenience driven. During intercept interviews at the wet-market, twelve out of fifteen consumers stated to be shopping at that particular location because it is close to home and because they are accustomed to going there: 'I shop in this market because I live near here and I am used to shopping here.' (Interview #13) The convenience of shopping at the nearby wet-market goes together with the habit of purchasing fresh vegetables on a daily basis. The habit of daily shopping was confirmed by 80 percent of surveyed respondents.

With all major wet-markets positioned along the main road, each urban neighborhood in Viet Tri has at least one wet-market nearby. All shoppers observed and interviewed during this research came to the market on foot to buy their daily essentials

³ Practical consciousness refers to a particular way of knowing the rules without being able to provide discursive accounts of the rules being applied in the practice.

and then walked home with a basket or a couple of plastic bags of groceries. This routine practice of daily visiting the most proximate wet-market is an important contextual factor when analyzing how consumers deal with food safety. One consumer stated during an intercept interview: 'If they sold officially certified safe vegetables near here, then I would buy them frequently.' (Interview #4) The habitual practice of buying vegetables within the wet-market closest to home hampers the active search for alternative sales locations. For the analysis of the food safety strategies developed by consumers it is important to notice that the range of products and risks to be acted upon is limited to those made available at the wet-market closest to home. Given this limitation, however, consumers can still make relevant choices about the retailer or vendor to buy vegetables from and about what kind of vegetables to purchase.

4.4.2. From whom to buy?

Given the fact that selecting the place or site for purchasing vegetables is routine-driven for most of the consumers, the next step of the sequence – the selection of the seller – becomes the next important aspect of the risk-handling strategies of the consumers. When the seller can be trusted, consumers tend to believe that vegetables are safe: 'I bought these vegetables from a trusted seller, so they are safe for consumption.' (Interview #9) Consumers display different ways of selecting a trust-worthy seller. First, they select a seller who they know personally and with whom they have been interacting previously. This personal relation is regarded a guarantee for food safety since Viet Tri consumers believe that if they know the seller well, the seller will not lie to them. During intercept interviews, consumers stated:

"I know these people, they don't lie to me about the vegetables they sell." (Interview #12) "Basically, we only buy vegetables from people we know well here. We do not buy from people we don't know well because we are not sure if they are reliable or not." (Interview #11) "The vegetables I just bought are grown by friends. They bought the seeds and grew it by themselves. So I really trust them." (Interview #9).

Second, consumers tend to buy their vegetables from *local* growers in particular. These local growers, also called 'villagers', operate mainly in the rural outskirts of Viet Tri city. Consumers consider these sellers trustworthy because local growers are believed to use less agro-chemicals as they also consume the vegetables themselves. One consumer stated:

"I am concerned. If I buy unsafe vegetables, it will affect my health, so I have to buy it from small-scale producers. Nowadays, mass producers use a lot of chemicals to enhance their productivity, but then the vegetables become unsafe. I only buy from back yard gardeners. These people do not mass-produce, so they are trustworthy." (Interview #4).

Finally, consumers tend to put active trust in sellers who offer only a restricted assortment and limited volumes of vegetables. This is regarded an indication of local backyard farming:

"I bought these vegetables from people in the neighborhood. I trust the sellers because they also eat these vegetables themselves. They only sell eight to nine bunches surplus. I myself also grow vegetables and sell the part we cannot finish. So these vegetables are basically safe and clean." (Interview #6) "If people only offer a little amount of chayote or squash, the vegetables are normally clean. They grow vegetables for themselves and sell their surplus to us." (Interview #4).

For some consumers, establishing a relationship with a trust-worthy seller is regarded a guarantee for not having to bother any longer about the kind of vegetables to be selected and the food-safety risks involved. As one of the intercept consumer stated:

"I am not concerned with the quality of the vegetables I buy because I am buying from home growers so nothing to worry about.

If the seller has already washed the vegetables, I even don't have to do that myself." (Interview #7).

However, the majority of the consumers interviewed during intercept interviews (13 out of 15) still had considerable doubts about the safety of the products, as illustrated by the following quote:

"I usually buy vegetables from the salespeople who I know. But I still know nothing about the quality of the vegetables. It's just my thought – I think they will tell me the truth, they don't tell lies about the methods used in growing these vegetables, but I still don't feel safe." (Interview #2).

The ambiguous form of trust in the actual food safety of the stated-to-be-safe vegetables at wet-markets was also reflected in the household survey among Viet Tri consumers. To the question "To what extent do you believe that the safe vegetables you buy are truly safe?" less than seven percent of the respondents indicated to 'totally believe' the stated food safety (Table 7).

In short, the first preference of Viet Tri consumers at wet-markets is to buy from sellers who exemplify personalized trust in terms of direct link with production. Second best is the wet-market retailer they know and whom they believe not to sell vegetables that carry health risks. When shopping in modern retail outlets is not taken into account, consumers have to use concrete skills and knowledge to make informed food safety decisions in the context of the taken-for-granted setting of the wet-market. Knowing whom to buy your vegetables from turns out to be one of the central rules or heuristics governing the performance of the practice. We now turn to the rules governing product selection against the background of food-safety concerns.

4.4.3. What to buy?

Like the habitual choices for nearby wet-markets and the selection of trustworthy sellers, the decisions about what kinds of vegetables to buy also seem to be routinized and deeply embedded in consumers' daily life-worlds and their rationalities. During intercept interviews, consumers explained that they generally buy different kinds of vegetables everyday. They buy the kind of vegetables they like themselves or they know to be liked by other family members. "Each day we want to eat different vegetables." (Interview #1) "I am fed up with other kinds of vegetables, so I bought these for a change." (Interview #2) "I just bought morning glory because I love these vegetables. Its soup cools you off from this heat." (Interview #13).

In dealing with perceived food safety threats consumers appeared to combine the preference for a specific seller with the daily choice about what to put on the table. An illustrative reply from a consumer at the central wet-market to the question 'Why did you buy these vegetables and why here?' was: 'I shop here because it's close to where I live; I just bought 'kang kong' (a specific kind of spinach, ed.) because it is delicious and I bought it from a trusted seller, so it's safe.' (Interview #11).

The product choice enacted within the context of the available choice infrastructure is about selecting specific vegetables that fit

Table 7
Consumer confidence in safety of vegetables purchased at wet-markets.

	Frequency	%
I totally believe	10	6.6
I moderately believe	89	58.6
I don't really believe	50	32.9
I don't believe at all	3	2.0
Total	152	100.0

Source: Household survey. Response to single answer question: 'To what extent do you believe that safe vegetables are safe.' *N* = 152

within the frames of taste and diet, which are routinely applied by consumers. Given these frames, product choice is informed by looking at: (1) external appearances, (2) seasonality, and (3) the combination of type and origin of the vegetables. These indicators, applied in a routine, practical way, are contributory variables for consumers in confronting – e.g. making informed guesses about – the food safety threats that come along with the everyday practice of shopping for vegetables.

First, the external appearances of the vegetables on offer are important in selecting safe vegetables. Criteria such as ‘not too green, beautiful and big’ and ‘a bit eaten by worms’ are particularly considered as relevant indicators of food safety:

“I don’t choose too green or too fresh vegetables and neither those that look too good, because it’s likely they have chemicals; that’s why they have such good looks.” (Interview #12) “When the vegetables I buy are a bit eaten by worms I am less concerned about harmful pesticides being used.” (Interview #1).

The following observation at a wet-market shows how consumers skillfully apply certain knowledge when carefully selecting the vegetables to buy:

A woman selects pak choi at a small vegetable stall at the central wet-market. She studies the vegetables and briefly sniffs them before deciding to buy them. When asked why she smelled them, she answered ‘to check for a chemical smell because the vegetables looked so good’. On the one hand, she stated that good appearance of the vegetables is a sign of freshness, but on the other hand it can also indicate chemical usage. Because the vegetables did not smell of chemicals, she decided to buy the vegetables.

Second, seasonality is used as an important food safety indicator. Consumers believe that far more agrochemicals are used in off-season cultivation: ‘I only buy these vegetables in the winter season, because in the summer (the off-season) the use of crop protection products doubles, especially fertilizers.’ (Interview #10) In the household survey no less than 80 percent of the respondents stated to only select vegetables that are in season.

Third, when judging food safety, the type of product is being assessed, also in relation with product origin. As in the main cities of Vietnam (Figuié et al., 2004), consumers in Viet Tri consider leafy vegetables to be less safe than roots and tubers. In the end, however, the actual product selection is guided not by vegetable type but by the combination of type and geographical origin of the produce. In the survey, this is reflected in the answers of the respondents about the perceived safety of water spinach. Leafy vegetables and in particular spinaches are perceived to be unsafe, but when asking about the specific spinach ‘kang kong’, consumers are less concerned about the safety of this particular leafy vegetable (see Table 8). This can be explained by the fact that kang kong is

Table 8
Consumer perceptions on safety of different types of vegetables.^a

	Perceived as unsafe by % of respondents)
Roots	20.4
Tubers	17.1
Green leaf vegetables	51.3
Spinaches	59.3
Kang Kong	22.4

^a Vegetables in the Vietnamese diet are commonly cooked, except for herbs and lettuce. Our survey included the 14 most consumed vegetables, which are generally stir-fried, boiled or blanched.

Source: Household survey. Response to question: ‘Independently from the source can you rate how you generally consider the following vegetables in terms of safety?’ *N* = 150

Table 9
Customary indicators of safe versus unsafe vegetable purchasing.

	Safe purchasing indicators	Unsafe purchasing indicators
Seller	Vendors with small volumes: <ul style="list-style-type: none"> • Mainly back yard cultivation • Sellers also eat it themselves Personal relations: <ul style="list-style-type: none"> • Friends/neighbours don’t lie • Elderly people don’t lie 	Retailers with large volumes: <ul style="list-style-type: none"> • Commercial anonymous production Un-known source: <ul style="list-style-type: none"> • The more anonymous the more uncertain
Product	Seasonality <ul style="list-style-type: none"> • Seasonal produce External appearance: <ul style="list-style-type: none"> • A bit eaten by worms • Not too big • Fresh • Natural smell Vegetable type: <ul style="list-style-type: none"> • Roots, tubers and sprouts • Locally grown green leaf vegetables: water spinach, amaranth, and sweet potato leafs Origin: <ul style="list-style-type: none"> • Local production area • Production area with good image: Dong Anh, Dalat • Purchasing at the production location • Home-grown 	Seasonality: <ul style="list-style-type: none"> • Off-season produce External appearance: <ul style="list-style-type: none"> • Too shiny • Too big • Too beautiful • Chemical smell Vegetable type: <ul style="list-style-type: none"> • Green leaf vegetables Origin: <ul style="list-style-type: none"> • Far away production area • Intensive cultivation area • Areas close to industry • Areas close to agro-chemical factories

Source: Combined data from intercept interviews, in-depth interviews and household survey conducted in this research.

produced by local backyard growers, who are perceived to apply safe cultivation methods (see 4.4.2). Also other local backyard grown leafy vegetables, like amaranth and sweet potato leaves, are perceived as being safe. Further, consumers mention vegetables with skin to be relatively safe because the skin reduces the chance that chemicals are absorbed and because it is peeled off before consumption. In a similar manner, root vegetables are considered safe because, even when fed with growth stimulants, consumers expect the stimulants to be absorbed only to a limited extent.

In purchasing practices, product choice is closely linked to information about the origin of the vegetables on sale. Consumers want to know whether the vegetables on sale are from the vicinity or not. When products originate from the local area, consumers tend to trust them, especially if the seller is also the grower. However, consumers indicate that the strategy of buying local is only part of their food safety strategy. Since the local assortment is limited, they still ‘have to’ purchase vegetables that are produced outside the local area. When vegetables are purchased from more distant, anonymous sources, for example through the more professional retailers at the formal wet-markets, background information on producers and production areas becomes crucially important. Most consumers expect vegetables originating from well-known vegetable cultivation areas in Vietnam, like Dalat, to be more reliable in terms of food safety quality. Still, even when vegetables are produced in production areas with a good reputation nationwide, origin is not regarded a guarantee for food safety, as exemplified in the intercept interviews:

“Even if I know where the vegetables are produced and it is a prestigious area, like Dalat, I still don’t know for sure if the vegetables are safe as origin doesn’t tell me anything about the actual production method.” (Interview #8).

With respect to the local level, interviews with consumers revealed that many consumers are quite opinionated about some specific production areas, and able to concretely pinpoint areas that they consider more or less trustworthy in terms of food safety. For example some consumers specifically refer to an area close to Viet Tri, in the vicinity of a fertilizer factory. They are convinced that

chemical fertilizers are more easily available close to the factory and therewith more likely to be used in excessive ways.

Both consumers and retailers at wet-markets generally trust vegetables that are grown within the city boundaries to be safe. This assessment results from a combination of factors and variables: small-scale production, first-hand knowledge about the area and growers selling their own produce. Areas that are less trusted in terms of food safety appeared to be either large scale production zones for 'anonymous' urban markets or areas close to industrial zones.

Consumer: "These vegetables were grown by people living here. Only here it is safe, if you travel down Thanh Mieu (an industrial area within Viet Tri ed.), vegetables are not safe any more." (Interview #7).

Retailer: 'My customers don't like vegetables from Vinh Tuong district as it is known to be an intensive cultivation area for a non-local market (e.g. Hanoi), which makes it suspect to the overuse of agrochemicals.' (Interview #18).

To summarize the key findings of this section on Viet Tri consumer strategies for handling food-safety risks at wet-markets, we argue that three steps turn out to be relevant for consumers who are performing this practice. First, the site or location for the daily purchase of fresh vegetables is chosen in a highly routinized, taken for granted manner. Second, within the self-chosen limits set by the locale of nearby wet-markets, consumers deal with food safety threats by selecting a retailer or a vendor they think to be trustworthy. Third, they use specific heuristics for the final selection of the product, combining product characteristics with other factors like seasonality and geographical origin (Table 9).

5. Conclusion and discussion

In our research, we aimed to answer two main research questions. First, why do consumers in Viet Tri not embrace the supermarket modernization of the fresh-food system as an appropriate solution for their apparent and serious food-safety concerns? Second, if they choose to stick to their established routines of doing the daily vegetable shopping at the nearby wet-market, how do they confront their food-safety concerns in the context of this particular practice? We will answer the second question first, since this will provide some important clues for answering the first research question. We conclude with some recommendations on Asian food safety policies in the near future.

To understand modernization processes, it is important to study traditions. Some traditions are well established, routinized and deeply embedded in the life-world. Shopping for vegetables at nearby wet-markets can be regarded as an example of such a taken for granted, traditional routine. When purchasing their vegetables at wet-markets, consumers do not possess first-hand knowledge on the food safety risks at play, so they have to rely on other mechanisms, which can help them to establish trust in their daily food. The conceptual framework of social practices was offered to discuss how situated actors reproduce trust in food in a routine manner, which is influenced by the particular context of the wet-market practice. It is against this theoretical background that we answer our research question on the reproduction of trust among Viet Tri consumers and providers.

Our research shows that food safety is a well-recognized dilemma by both providers and consumers of vegetables. Both in the survey and during the intercept interviews people express clear opinions about food safety. Both providers and consumers talk about the issue without hesitation and are not surprised that food-safety is brought up as a central concern. Further our research points out how within the wet-market setting both providers – retailers and street-vendors – and consumers apply different

repertoires for generating trust in vegetables. In matching supply and demand in matters of food safety they both use variations of skills and knowledge predominantly in an implicit, almost 'silent' manner, without being visible or being discussed in an open reflexive manner. Getting to know these repertoires is important since they provide essential clues for understanding why traditional trust relations survive under the increasing treats and anxieties generated by food-safety scandals.

During the interaction between providers and consumers, a number of mostly implicit questions and dilemmas are being confronted and handled before a successful transaction occurs. Is the vendor or retailer a trustworthy person, and can I resort on the food-safety strategies that he or she follows? Is the product safe? What do I know about the past performance of the provider?

By using a number of different methods in the context of a practices based approach, we were able to reconstruct the specific repertoires used by the key social actors during their interactions. As reported in Section 4, personalized trust-relations (reciprocity), locality (known territories), seasonality and personal skills for identifying the relevant product characteristics turned out to be the most important ingredients of the repertoires used.

Because our research was conducted in Vietnam, it is important to point out that social relations between actors have particular characteristics that originate from the broader cultural context of Southeast Asia and its tradition of collectivism and reciprocity in social relations. This cultural context includes concepts of social capital, gratitude and mutual indebtedness (Long and Huang, 2002). For our particular practice, this implies that trust is reproduced in the context of exchanges between 'sellers' and 'buyers' who know each other and who are crucially aware of their mutual dependencies. Sellers and buyers often have intertwined social networks and vegetable purchasing for that reason must be regarded as more than a simple economic transfer. Buyers depend on providers for getting access to safe vegetables, while sellers simply cannot afford to lose consumer trust. The continuity we observed in the personal relationships between buyers and sellers is at the basis of the persistence and continued dominance of wet-markets in the overall food system of Viet Tri.

Consumers adhere to their established food shopping routine as long as for them the existing, 'practical' repertoire of food safety measures applied at the wet-market suffices to counterbalance their anxieties about the potential risks that come along with fresh vegetables. The best way to describe the present situation is in terms of a precarious balance of risk and trust since our research shows that the continued dominance of wet-market practices in Viet Tri does not at all imply that food safety concerns are absent or neglected by its key actors.

The food safety dilemmas experienced by consumers in particular do not (yet) urge them to break with the well-established routine of shopping for vegetables at wet-markets. By performing the practice on a daily basis, consumers reproduce long established and culturally embedded relations of trust. Building upon their existing skills and knowledge, they demonstrate to themselves and others to be able to confront food-risks in acceptable ways. Applying the risk-handling repertoires does not mean that food safety threats are dealt with in solid proof manners. Consumers are aware of the fact that their powers to confront food safety risks are only partial and restricted. However, our (survey) research has shown that despite this awareness and despite their stated preference for certified, safe vegetables, Viet Tri consumer do not seek alternative sales points outside the social and geographical scopes of their everyday life routines. The absence of a modern retail shift thus far is demonstrated by the low volumes of vegetables sold at the only modern retail-shop selling certified safe vegetables in Viet Tri, which, given the fact

that none of the consumers in our research could name this shop, does not appear to be related to price levels.

This brings us to a discussion on the first main research question: why don't consumers shift to modern retail outlets to secure themselves of safe vegetables? As discussed in the opening section, Viet Tri-like food safety issues can be observed throughout Southeast Asia as they arise from common characteristics like rapid urbanization and changes in the food provision systems (Xuemei Bai, 2000; Othman, 2007). Across the region, the official, institutional response to food safety concerns has been to stimulate modern (imported) retail formats like supermarkets, which provide certified food. This strategy builds upon the idea that societies developing from predominantly agricultural into modern (industrial) societies gradually do away with tradition. Traditional, personalized trust relations are being replaced by modern commitments like objectified certification schemes. As our analysis demonstrates, the limitations of the supermarketization model (Reardon et al., 2005) are also witnessed within the contemporary context of Vietnam. Consumers stick to their wet-market practices, despite Vietnamese government policies that stimulate retail modernization and restrict the practice of shopping at wet-markets.

Our research evinces the need to consider the relationship between global trends in retail modernization on the one hand and the continued dominance of wet-market shopping practices on the other. Instead of putting all strategic resources on either the one or the other strategy, efforts of integration and mutual adaptation of both strategies could be considered. Understanding the dynamics of the practice of buying and selling fresh vegetables at wet-markets might be instrumental when designing hybrid structures of modern retail and traditional wet-markets in such a way that (government) policies stimulating safe vegetable distribution are supported. First examples of efforts in this direction exist in Singapore, where the concept of wet-markets is modernized and provides for communal space for social interaction through the development of food courts. Pursuing this trend of hybridization prevents that consumers have to break with long established routines in an isolated, radical way. The efficacy of food safety strategies depends on the articulation within long established practices and personalized trust-relations, which sustain them. This seems to us to be the way forward in achieving safer modes of vegetable provision and consumption in Vietnam and wider Southeast Asia.

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Appendix A. Supplementary data

Supplementary data related to this article can be found at <http://dx.doi.org/10.1016/j.jrurstud.2014.04.002>.

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