Staff Paper

Impacts of Agrifood Market Transformation during Globalization on the Poor's Rural Nonfarm Employment: Lessons for Rural Business Development Programs

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Summary – This paper presents emerging evidence pointing to the transmission to developing countries' rural spaces of the impacts of agrifood market transformation occurring at national and global levels. That transmission takes place via retail chains penetrating intermediate cities and rural towns, and urban-based food manufacturers selling products to those chains as well as to traditional shops. The paper presents and justifies three main hypotheses concerning the impacts of that penetration. (1) The direct effect is that the modern retailers and modern-sector processed products directly compete with, and present potentially major challenges to, the processed foods, farm inputs, and commercial services already being undertaken in the RNFE sector by the rural poor among others. (2) The indirect effects is that modern sector firms tend, once they have "modernized" their procurement systems, to prefer larger suppliers if available, and/or small suppliers that have the requisite levels of capital assets. This further translates to a potential labor substitution bias, in particular of unskilled labor, although it may drive skilled labor demand. (3) The production and consumption linkage effects of the above impacts on RNFE firms, laborers, and farmers, all else equal, probably implies greater demand for non-tradeable goods and services in the RNFE that correspond to the demand patterns of the upper stratum of rural consumers. Faced with the above, what can business development programs do? (1) Given the change in the market context, it will be increasingly undesirable and "un-strategic", except in the most remote, hinterland areas, to maintain the separation between competitiveness and nonfarm employment programs. At least for RNF activities that supply processed products, farm inputs, and retail commerce, RNF enterprises will need to face the same general challenge that exporters in their country face on the global market, and urban firms face, which is to compete on cost and quality. (2) Second, maintaining the analogy to international competitiveness, it will be necessary go beyond a generic competitiveness approach, to employ a "customized competitiveness" strategy (a term used by Reardon and Flores 2006 for export programs, but applicable here). Such an approach focuses on understanding the specific requirements of transformed markets and building the capacity of particular groups to respond to those requirements (as suppliers) or match cost and quality and compete for specific niches. The capital assets that programs should building include market intelligence capital, organizational capital, technology capital, and financial (and risk reduction) capital. (3) In the economic transformation, this time in the rural space, the poorest, those with least assets, are again vulnerable. Special attention should be paid to equipping those households and firms to participate in the increasingly challenging rural nonfarm economy.

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1. Introduction

Rural nonfarm employment (RNFE) - manufacturing and services taking place in the rural space – has long been important to rural families (including the poor) in developing countries. This has been shown in a line of research from Hymer and Resnick (1969), to more recent work (synthesized for example in Lanjouw 2006; Hazell et al. 2006; Reardon 1998, 2006; and Winters et al. 2006). These recent works show evidence of growth of RNFE over the past several decades, and its current major importance in rural incomes (on average roughly 40-45% of rural household incomes in Africa, Asia, and Latin America) and for poverty alleviation. In many areas the RNF economy is related in production- or consumption-linkages with the agricultural economy, with important mutual influences on nature, level, composition, and technology.

Research on shocks to the RNFE in a given rural space (affecting its nature, level, and distribution) has focused on three types of shocks:

> (1) *macro level, external shocks*, including (a) changes in macroeconomic policies on the RNFE (for example, Abdulai 1994, and Rubey 1995), via for example changes in tariffs on imported equipment used in RNF activities, or changes in interest rates affecting the factor bias of RNF technologies (such as rice milling in Indonesia, Timmer 1974); and (b) competition of cheap imports (for example of maggi cubes, plastic pails, or milk powder) with rural manufactures; beside the oft-cited case of imports of British cloth undermining the rural textile industry in India in the 1800s, there are well-known modern cases such as the penetration of Nestle's maggi cubes into rural markets all over West Africa, competing with local condiments made by local women (Grains du Sel, 1997).
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> (2) *meso level shocks intermediate between external-to and internal-to the rural space*, examined by a relatively recent literature on "rur-urbanization" (Jordan and Simioni, 1998), the development of intermediate cities and rural towns (Hardoy and Satterthwaite, 1989), and their effects on the rural space, including the RNFE (Reardon and Stamoulis, 1998, Renkow 2006);
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> (3) *a combination of (2) and (3)*, mainly in an emerging literature examining how globalization directly affects the economies of intermediate cities and to some extent rural towns, such as the rise of export-oriented maquiladora sectors in rural towns, or shocks from international competition on rural town export-oriented industries (see for example Bolay 2005). This new literature has not yet explored how the effects of those international shocks on rural towns in turn translate into effects on the nature, level, and distribution of the RNFE.

But a glaring gap in the literature on RNFE is emerging, in that it has not yet examined a key, but relatively new, shock that may be of rapidly increasing importance to RNFE. That shock is the recent and rapid transformation of the domestic agrifood economy in developing countries on their RNF economies. That "transformation" has involved rapid consolidation and multinationalization, as well as technological, organizational, and institutional changes in food systems in the past two decades, with the bulk of the change in the past 5-10 years. That transformation has brought the rapid diffusion of supermarkets, large-scale processors, and new generation wholesalers (Reardon et al 2003; Wilkinson 2004).

We must underscore the difference between understanding globalization's effects on RNFE only by focusing on the (very limited, mostly enclave) cases of direct international effects on manufactures or services in the rural space (in particular, where the rural towns serve as export platforms such as for maquiladora), versus treating the far broader and larger impacts of domestic agrifood sector restructuring on RNFE. Developing countries in general import a tiny share of their consumption, and export a tiny share of their output of processed foods. By far of greater importance than trade in those products are local production and sales of FDI-based enterprises and their domestic counterparts (Regmi and Gehlhar, 2005).

Our paper focuses on this gap in the literature, and posits multiple potential impacts of the domestic agrifood sector transformation on the RNFE, and posits that the impacts can be important and increasing. In this paper we focus mainly on the subset of nonfarm activities related in some way to the agrifood sector (food processing, farm input provision, and commerce related to agrifood products); similar forces are at play in nonfood product markets.

We proceed as follows. Section 2 summarizes briefly the necessary background points from the three relevant literatures. Section 3 presents a simple heuristic model of the channels of impacts. Section 4 then hypothesizes (and presents emerging evidence) of implications per segment of the food system with a focus on its distributional effects on small scale operations in which the poor participate. We focus our attention on the rural town and intermediate city as the "transmission point" for national agrifood sector restructuring onto the rural space. Section 5 concludes with policy and program implications.

A caveat is that while we recognize that there is a spectrum of situations present in the developing world, from low transformation (of the national agrifood sector) and little transmission (to rural areas), to high transformation and high transmission, we focus on the latter situation as most interesting for the generation of hypotheses of links, knowing that the applicability of those hypotheses may only be in the medium to long run in the situations of currently early or weak transformation or transmission. The paper is meant to lay out hypotheses that will lead to a new line of research. There is little systematic information to draw on so we must weave an argument with dispersed cases and illustrations to undergird what we hope are reasonable propositions.

2. A Simple Heuristic Model of the Links

To generate systematic hypotheses about the possible impacts of the food industry transformation on the RNF economy, we first lay out a simple "chain rule" three sets of changes, which one can posit as recursive from the first set (the determination of food industry transformation) to the second and third (simultaneous and related) sets of change, including determination of RNFE change, and determination of agricultural change.

> Model block 1: The demand and supply side determinants of food industry transformation, "macro shocks" (increasing urban incomes, foreign investment, better roads) – condition food industry behavior (expansion, investment, marketing strategies, organizational and institutional change), and in turn transformation (consolidation, multinationalization) combined with food industry procurement system change.
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> Model block 2: The food industry transformation, and its concomitant procurement system transformation, translate into proximate shocks such as price changes and transaction requirements for RNF suppliers. Those transformations constitute a series of "meso shocks" – which in turn condition the demand for and supply of RNF goods and services, in the product market, and the derived demand for and supply of factors such as capital, credit, labor, and inputs. Note that the "macro shocks" above also affect the RNF sector directly. Those meso shocks are "transmitted" via the channel of the rur-urban space (intermediate cities and towns). These behavior bloc changes in turn condition outcomes such as the spatial and socioeconomic distribution of RNFE, returns to the activity, and entry requirements.
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> Model block 3. Food industry change (via procurement system change), as well as the RNFE changes from Model Block 2, affect agriculture directly, inducing technological and income change. The latter translate, via production and consumtpion linkages, into a second round of effects on the RNFE.

The structure of the model informs the structure of the hypotheses and evidence section 4. Before embarking on hypothesizing, however, in Section 3 we provide the "grist" for the hypotheses, presenting salient evidence concerning the nature of the food industry transformation, the nature of the development of the "transmission node" (the rur-urban space), and the RNFE itself.

3. Background: Key Points concerning Food Industry Transformation, Rur-urbanization, and the development of the RNFE

There are three key literatures that we treat in following order: (1) the "shock" (the agrifood economy transformation at national level); (2) the "bridge" (the transmission node of that shock, via the intermediation of the intermediate city and rural town on the rural space, and (3) the RNFE economy itself.

3.1. The Food Industry Transformation in Developing Countries as the "Shock" to the Rural Economy

This section briefly reviews the relatively recent line of research (drawing from the references cited above), starting in the 1980s, on the transformation of developing country food industry

segements (retail, processing, wholesale/logistics) under globalization. Four sets of points are essential.

First, the research shows rapid consolidation and multinationalization of the food industry segments in developing regions. The consolidation is manifested in the rapid spread of large-scale first- and second-stage processors (such as Nestle and Parmalat into dairy sectors around the developing world), the rise of large specialized (and dedicated to modern food industry segments) wholesalers and logistics firms including the spread of logistics multinationals in developing countries, and the rapid diffusion of supermarkets (and other modern retail such as hypermarkets, hard discounts, cash and carries, and convenience store chains). The determinants of this food industry transformation identified include urbanization and income increases on the one hand, and active national policies, foreign direct investment, and food industry procurement system modernization on the other (Reardon et al. 2003; Wilkinson 2004).

Second, this trend is of course occurring at widely different rates (or waves) over countries (with the first wave, with its "takeoff" point in the early 1990s) in Central Europe, South America and East Asia outside China, the second wave (with its takeoff point in the mid/late 1990s) in Central America, Southeast Asia, and the third wave (with its takeoff point in the late 1990s early 2000s) in East Europe, South Asia, and parts of Africa); some other areas such as West Africa may be some time before these trends are manifested there. The trends is also occuring at different rates over product markets (with processed food markets transforming far earlier and faster than fresh food markets, just as occurred in the US and Western Europe). Despite the sharp variation, the clear trend is a moving average of transformation.

Third, the trend also is occurring at widely different rates (or waves) within given countries. On the one hand, there is no clear pattern of which food industry segment transforms first, sometimes it is the food processing segment, followed by retail and wholesale restructuring; other times it is first the retail sector that transforms, leading to a cascade of changes in the processing and wholesale sectors. Sometimes all three co-evolve. On the other hand, there is a clear trend with respect to spatial and consumer segment penetration: first transformed are the food markets of large cities, then secondary then tertiary cities, then rural towns; moreover, first penetrated are the food markets of the relatively rich, then the middle class, then the lower middle class, then the working poor. The upshot is that in the first and second wave countries, and in some of the third wave countries, the distribution channels of large processors and supermarkets are already in the tertiary cities and rural towns. It is mainly at this interface point that we expect the emergence of <u>direct</u> effects of the overall food industry transformation on the RNFE.

Finally, the food industry transformation, whether in major urban areas or in rural towns, can have <u>indirect</u> effects on the RNFE via its effects on agriculture, which changes in turn, through production and consumption linkages, affect RNFE. The vector by which the food industry transformation affects agriculture is of course via modernization of that industry's procurement system. As with the other phenomena, this is occurring at different rates over countries and product markets, but also over food industry segment actors. For example, this modernization started very recently but is occuring quickly among the leading supermarket chains in South

America, Mexico, Central Europe, and Southeast Asia – but has not yet occurred in the second and third tier chains in those same places.

The transformation of procurement systems consists of several trends: (a) centralization of procurement (through distribution centers); (b) regionalization and globalization of sourcing; (c) shift from traditional wholesale markets to specialized wholesalers; (d) spread of logistics multinationals into developing markets; (e) shift from spot market relations to implicit contracts through preferred supplier lists; and (f) the emergence of private standards of quality and safety, sometimes linked to the standards of the global or regional multinationals. These procurement system changes translate into changed requirments of farmers and first stage processors, hence technology change and commercial practice change at farm and post-harvest levels, and attendant income changes. We expect that these can translate, via production and consumption linkages, into effects on the RNFE, with hypotheses discussed further below.

3.2. "Intermediation" of the shock through the rur-urban segment

The potential "bridge" between the transformation of the domestic agrifood economy of the country is mainly (but not exclusively) the rur-urban portion of the rural space – the intermediate cities and rural towns. There is no official generally accepted definition of these, but rural towns tend to be small agglomerations (in Latin America for example these may be 5,000 persons) with economies closely tied to the countryside (or to some specialization such as tourism or maquila); the intermediate cities are usually from some ten's to several hundred thousand, and are central services nodes in the broader rural space.

The recent cluster of literatures on "rur-urbanization", the development of intermediate cities and rural towns and their effects on the rural space (including an incipience of research on the effects specifically on RNFE), the new economic geography, and rural territorial development. The key point made in those literatures of central relevance to the present paper is that the intermediate cities and rural towns are key determinants of the level, composition, and technology of activities (hence including RNFE) in the rural space. That "intermediation" role of the rur-urban center is neatly summed up as follows:

> As medium-sized cities that are well integrated within a rural region, they are – unlike the great metropolitan centers - ideally suited to act as an interface between the urban and the rural world. The latter is primarily determined by its position between local centres with direct contact to the rural world, or specialised towns on the one hand, and metropolitan centers that function at national and international level on the other." (GRAL/CREDAL, 1994, p. 130).

The importance of towns as "orderers" of rural space was first signalled by von Thunen (1842), noting that the decline of land rents as one moves away from a town is correlated with variation in land use. Economic geography and regional planning literatures have since analyzed the development of intermediate cities and rural towns (e.g., Hardoy and Satterthwaite 1989; Jordan and Simioni 1998), and their impact on the use of rural space. Schejtman and Berdegué (2002) present the concept of "rural territorial development" as a strategy to use an understanding of the integration of the rural space to design development strategy.

Krugman (1991) initiated the "new economic geography" which, as Renkow (2006) notes, formalized the inituitively appealing concepts central to the earlier work (cited above), including central place theory, cumulative causation, and location theory, in a unified framework, where economic activity in the rural space is determined by scale economies, size of market, and economic distance.

Neither of the above schools treat spatial economic impacts on RNFE explicitly in a systematic way. That gap has been addressed in two recent literatures.

(1) Conceptual analyses (with illustrations) that are a marriage of new economic geography, new institutional economics, and production and consumption linkages analysis; these include Reardon and Stamoulis (1998) and Renkow (2006). They model the effects of the growth of intermediate cities and rural towns on the RNFE via (a) output, factor, and input market size changes; (b) agglomeration and scale economies; (c) economic distance, including transaction cost changes. Renkow notes that rural towns play important roles in marketing, production, and service functions to the RNFE sector. He notes for example that in various developing areas, RNF enterprises source the majority of their inputs from rural towns, market a large portion of their output in towns and villages, and work as labor and service providers in RNF activities in the town and the countryside.

(2) Recent empirical analyses, for example Fafchamps and Shilpi (2003) for Nepal, and Escobal (2005) for Peru. These studies focus on the level and subsectoral nature of diversification activities at various distances from towns and rural infrastructure.

3.3. RNFE Development in Developing Countries

Three sets of points are essential.

First, the "rural" in RNFE includes the countryside and rural villages and towns classified as "rural" by that country's government. The definition thus varies over countries; the upshot is that a rural town of 30,000 might considered by Chileans as non-rural and by the Chinese as still very rural. Moreover, the definition of rural used by researchers often includes rural towns whose economies are closely linked (in production and consumption linkages) with the countryside, even if the rural town in question is bigger than the "rural population density" cutoff point officially used in the country (Reardon et al. 1998). For simplicity in this paper, we will think of the rural areas as the countryside (where the land use is mainly farming even if the labor use is a mix of nonfarm and farming) and the rural villages and towns (whose land use is mainly non-farm but whose activities range from closely production or consumption-linked to farming (or other primary activities) to those less linked such as financial services.

Second, if one consults the few field studies that have taken place in roughly the same locations over two or more periods, and compares levels and shares of RNFE in total rural incomes from field studies in the 1960s and 1970s (controlling for location) with studies in the 1990s and 2000s, one tends to find a sharp increase in RNFE occurring over that period (Reardon et al.

2006). Rural economies have been diversifying away from farming. This field result is corroborated by rural employment data published by governments (Hazell et al. 2006). This growth of RNFE is concomitant with improvement of infrastructure and the formation of towns and villages. It is also consonant with the general theory of economic transformation on the supply side (Timmer 1988) and the disproportionate increase in demand for nonfood goods as incomes rise, per Engel's Law.

Third, there have been changes over time (and differences across locations) of the nature of RNFE. As RNFE develops (and as the zone develops):

(a) the share of autarchy (the z-good production of Hymer and Resnick) declines (Hazell et al. 2006), and commercialization proceeds, in parallel to that evolution in the agricultural sector (Pingali and Rosegrant 1995); The RNFE thus becomes increasingly integrated into the "market economy", is de facto "deprotected" by greater access to infrastructure and town-countryside interaction, and thus buffeted by forces therefrom;

(b) there is intra-sectoral diversification, mainly with an increase in the share of services (over the total of manufacturing plus services) (Reardon et al. 2006);

(c) there is a differentiation in scale and capital intensity of RNFE enterprises, for example demonstrated in India (Bhalla, 1997), even into a variant of dualism (but still small-medium scale);

(d) an increase in wage employment (relative to self-employment), which is concomitant to (c).

(e) there is a spatial shift of RNF activities into rural towns (Hazell et al. 2006).

The upshot of these points is that the traditional image of RNFE as a small microenterprise undertaking non-tradeable manufactures is a waning part of the RNFE, mainly found among the poorest and the more resource-poor zones; by contrast, services firms as well as a larger scale of small and medium enterprise, employing laborers, undertaking tradeable manufactures, is an increasingly important share of the RNFE. It is clear that these different segments of the RNFE would be affected differently by agrifood market transformation, which link we now examine.

4. Hypotheses and emerging evidence of Food Industry Transformation on RNFE

We organize our discussion of the effects of national/urban food industry transformation on the RNF sector organizing by the segments of the supply chain, downstream to upstream: retail, processing, wholesaling, farm inputs/factors; of course farming itself is only a context discussion here because by definition it is not in RNF sector, but derivative impacts on RNF from impacts on farming (of food industry transformation) are discssed. In each supply chain segment, we note challenges and opportunities the transformation may have for RNF.

4.1. Segments of Retailing of Consumer Goods and Farm Inputs

Modern retail chains have had a tendency to start in large cities and then, driven by competition, to spill frenetically into intermediate cities and smaller towns in many countries of the developing world. Most of this move into the broad "rural space" has occurred in only the past five years in the "first wave" countries, and in the past 1-2 years in the second and third wave countries (Reardon and Timmer 2006). Typically, these chains use a small/medium format (small supermarket, hard discount, mini market or convenience store) to penetrate rural towns. A key characteristic of the trend is that a leading chain will start opening stores in provincial capitals which will cause a stampede of store opening by other leading chains, and then by smaller chains and independents in small cities and rural towns to spread even into small rural towns to "occupy territory", so important in retail. The image is dominoes falling as chains react by spatial diffusion. This was for example observed in Chile over 2000-2001 (Faiguenbaum et al. 2002). Some chains start their life with a focus on rural areas, opening only later in urban areas; Wal-mart in the US market is the most well-known example of this.

The reasons noted in interviews by the authors with chain managers are as follows: (1) analogous to what foreign chains say about expanding into developing countries, the competition is relatively weak and the profit rate relatively high in rural towns relative to the urban centers; (2) rural towns represent both their own demand base, and draw in large numbers of countryside families who buy mostly processed foods and staples (as explained for example in an interview with the giant chain Lianhua based in Shanghai, Hu et al. 2004); this is doubtless facilitated further by substantial "commuting" of rural workers between the countryside and rural towns for daily work (for example, half of RNFE is in such commuting in rural Chile, see Berdegue et al. 2001); (3) in the retail "war", chains are forced to occupy as much territory as possible as fast as possible to forestall the same by their competitors, and a "pied a terre" in a rural town, given fast urbanization, becomes a solid position in a small tertiary city a decade later; (4) in many regions, there are returning migrants seeking the kind of retail experience they had during their migration; (5) perhaps odd to an urban reader, supermarkets and malls in small cities or large towns in rural areas are major "tourist attractions" where families spend the day or even weekend. For example, an Argentine chain makes entertainment for rural families a major feature of its outlets in those areas.

The competitive urge for the chains to expand to rural areas is sometimes encouraged and abetted by governments, such as in Russia, Republic of Korea, and Mexico. The Chinese government is encouraing small supermarkets in rural areas as a way of rapidly modernizing food markets; www.just-food.com reports in January 2006 "According to figures announced by the Ministry of Commerce, 70,000 supermarkets opened across rural China in 2005. The government hopes to establish 250,000 rural supermarkets between February 2005 (when an initiative was launched) and 2008." (no paging)

Given the importance of this trend for the retail economy context for RNFE, we provide a number of (typical) examples to establish the breadth, rapidity, and recentness of the trend.

> (a) Two leading chains in Mexico, Soriana and Wal-mart, started in 2005 opening stores in rural towns in Mexico, using a smaller format. Smaller regional chains are following suit.

(b) The convenience store chain "G7 Mart" announced March 2 2006 that it is building 10,000 stores throughout Vietnam, even in remote areas (PlanetRetail 2006b);

c) the Austrian retailer Billa is investing heavily in rural towns in Bulgaria (PlanetRetail, 2006a);

(d) the Dutch retailer Ahold is opening small-format stores in rural towns in Poland, targeting all with 5,000 inhabitants or more (CIES 2006a);

(e) Pick 'n Pay, via its franchise smaller supermarkets "Boxer", has been opening stores in rural towns in the poorer areas of South Africa since 2003;

(f) there are about 2000 Indomarets and Alfa minimarkets peppered around rural towns and provincial cities on Java, Indonesia, and expanding rapidly.

(g) RIL (of India) is preparing to invest between 2,000-3,000 crores "in creating a massive retail commercial infrastructure focused in Punjab's 12,000 odd villages… The company will employ its local centres to market modern veterinary services and quality fertilisers to farmers.." (The Asian Age, 2006, no paging) (note that a crore is a million, so this is 2-3 billion rupees).

(h) Lianhua (the largest chain in China with circa 4500 stores) is targeting store openings in townships in the eastern region of the country; they noted that these township-based stores have as their clientele a wide radius of rural families who come in to stock up on processed foods, staples, and nonfoods (Hu et al. 2004) (as we will see below in the case of South Africa).

(i) Domestic (such as the RIL example from India, above) and FDI-based agribusiness companies (selling farm equipment and inputs) have greatly expanded their operations in developing countries, setting up extensive distribution and marketing systems in rural areas as well as factories. A company with 20 billion dollars of sales, John Deere (www.deere.com) increased its exports (and local sales in foreign countries) five-fold during the "globalization period" of the past two decades, with a far higher share now than twenty years ago in the developing region market. For example, John Deere entered India in 2000, built a factory, established a technology/engineering center, and 250 distributorships over rural India. The distributorships often include repair services and in various countries (Argentina, Brazil, Mexico, South Africa) now include a credit division. They sell and service tractors large and small, sprayers, construction equipment, materials handling, and so on.

This expansion of modern retail chains (in supermarket or mini-market/convenience store formats as well as farm input stores, sometimes combined with consumer goods retail points as in the RIL case above) brings these retailers into the "market-shed" of RNF producers of processed foods and commercial services and farm inputs – bringing competition in two ways.

First, retail chains bring in, through their broad procurement systems discussed above, food products and farm equipment and other inputs from other rural areas or urban areas (as well as imports) into the zone. A caveat is that there is as yet no empirical analysis of the "counterfactual", comparing how much outside product that traditional wholesalers bring into rural areas, versus what modern retail chains bring in. Below we note that modern processors have set up effective distribution channels of their products to traditional shops in rural areas, so the effect of also having modern retailers might be one of simply magnifying and accelerating a trend started at a small scale by traditional traders, then a larger scale by modern processors.

Second, retail chains directly compete in providing commerce services (usually a large share of RNFE). In one sense, this is simply a change in who "owns" the RNF firm supplying commerce services, and thus perhaps where profits are reinvested (locally or in the city). However, modern retailing is usually much more capital intensive (and labor displacing) than traditional retail, and just as in large cities, this would tend to have the effect of competing with the petty commerce that absorbs low-skill labor. Faiguenbaum et al. (2002) give an example of a small rural town in Chile into which a small regional supermarket chain entered, eliminating most of the small shops from the town center. That is of course a common story in the past several decades from the US or the UK, or from the large cities in the developing world.

Third, farm equipment and input firms sell products that bring inexpensive but high quality manufactured farm equipment (such as the compact tractors of Mitsubishi and Kubota) to rural areas that compete with the local equipment such as animal traction equipment. These firms also provide repair services, again competing with local, small-scale RNF firms.

Systematic survey analysis is needed to establish the extent of both the spread of these chain stores in rural areas, and their effects on local RNF firms, and this research has not yet been done. We thus must rely on evidence from interviews with chains, and casual observation. However, several factors point to the emerging importance and probable direction of effects of the penetration of rural towns by retail chains.

First, retail chains supply mainly urban-manufactured products, in particular foods and light manufactures to their units in rural towns (beside larger urban areas) – to the extent they do not source those products locally. Typically, the urban-manufactures come from companies that are on the "preferred suppliers" list of the retail chains, and that are highly competitive at a national level, and thus (1) are cheaper than local products; or (2) are higher quality; or (3) are supplied to the retail chain or from the processing firm at a lower transaction cost than local products – or all three. An example is the ubiquitous line of Indofood products (snack foods) available in mini-market chain stores in small towns and villages around Java (Natawidjaja et al. 2006). This suggests that there is a correlation between the penetration of national brands of processed foods, and the spread of chain mini-markets, convenience stores, and small supermarkets into rural towns.

Second, there is scant consumer analysis of the effects on rural expenditure patterns of the penetration of retail chains in urban areas, let alone in rural towns. To date there is just one study (to our knowledge), but the direction to which it points is clear. D'Haese and Van Huylenbroeck (2005) show, for South Africa, that rural residents around towns in with supermarkets tend to

make their processed food purchases in those towns. Rural consumers are attracted by the lower prices of staples and processed foods that the chains' buying in bulk allows; there is emerging price survey evidence that supermarkets charge lower prices for processed foods than do traditional shops (Chile, Brazil, and Argentina: CNC, 2005; Kenya: Neven et al. 2006). Of course many more studies are needed to establish this point. However, this study points to the kinds of consumer preferences that retail chains perceive, revealed by their preference to rapidly expand their rural stores.

An (indirect) indicator of the emerging effects of the spread of retail chains on rural consumers and RNF businesses is the alarm already expressed at this trend by some local governments, such as by the Directorate of Agriculture of West Java concerning the chain-mini-markets (noted above) spreading through the rural towns and selling national brand processed foods that compete with the local, traditional baked goods and spices (Natawidjaja et al. 2006).

Too often parallels with the historical experience in now-developed countries are ignored, as a way of understanding current trends in often similar circumstances with similar economic mechanisms functioning. A case in point is that it is interesting that there appears to be a similarity between the emerging situation in rural retail in developing regions, and the US experience in the early 1900s when chain grocery stores penetrated rural towns (before the era of supermarkets per se) and brought in many national brand (such as the then new "Nabisco" brand) processed foods that wiped out local companies selling processed products, such as the famous "cracker barrel" suppliers, at that time RNFE *par excellence* (Levenstein, 1988).

While retail chains' recent penetration into the rural space is probably an unmitigated challenge for local food processors and petty commerce in dry goods and nonfoods, and possibly to rural workers by supplying labor-saving equipment, it is probably a boon to rural consumers (by lowering prices), to commercial farmers (by providing equipment and inputs that raise productivity), and to RNF enterprises in manufacturing and non-tradeable services that rely on purchased inputs often now bought from rural towns (Renkow 2006). We further explore the food processing segment next.

4.2. Second-Stage Processor (Food Manufacturer) Segment

Large-scale second-stage processors (final-form food manufacturers) have similar penetration strategies for rural towns, making sure that both traditional and modern stores in intermediate cities and rural towns, and small shops in remote areas, can regularly receive their products. Several examples concerning processed foods include the following. For example, packaged cheese from large urban cheese manufacturers was recently mainly in large cities but now in small shops in rural areas of Lempira, the poorest area in Honduras, apparently displacing or at least competing with local cottage-industry cheese (part of RNFE) (Zelaya and Reardon 2001).

One could find a handful of national and even global brands in shops in most rural areas before the 1980s, but we posit that the incidence has greatly increased in the past two decades. There has been no systematic empirical study of this that we know of, but can be inferred from the evidence of diversification of products found, and the establishment of distribution systems throughout rural areas by large companies. We posit several reasons for this.

First, the national-level share of food manufacturers of the large-scale food manufacturers (many of them foreign) has grown very sharply over the past two decades (see Wilkinson (2004) in general; for a dairy example from Brazil see Farina 2002). This has been driven by FDI and fierce competitive investment by national companies and regional multinationals such as CP (Thailand) and Sadia (Brazil) in poultry, processed meat, and feed products, Frito-Lay (US) Indofoods (Indonesia) and Bimbo (Mexico) in bakery and snack products, and snack and candy companies such as Arcor (Argentina). Wei and Cacho (2001) provide examples of Chinese baked products and noodle companies energetically competing with foreign noodle companies, lowering prices and diversifying product lines and distribution channels. This has driven foreign and domestic companies to compete for every segment of the market, and an important one has been huge rural market.

Second, within the context of consolidation and fierce competition, food manufacturing companies create broad and efficient distribution networks for their products in both urban and rural areas. Many of these have been built mainly in the past decade or two. Three examples are of interest:

(1) bakery goods distribution: for example, Bimbo and Sabritas, among the largest baked goods and snacks companies in Mexico (and Bimbo one of the largest in the world) have extensive distribution systems of trucks and warehouses in rural areas of Mexico and Central America, delivering to the gamut of retailers, from small traditional shops as well as modern convenience store chains like OXXO and small supermarkets in rural areas, and to supermarket hypermarket chains in cities. Indofoods has a similar operation in Indonesia.

(2) canned vegetables distribution: Lipovac (a large vegetable processing firm in Croatia) established a fleet of trucks and distribution network in 2003 to distribute to retailers in small towns in rural Croatia as well as major cities.

(3) dairy products distribution: Wimbl Dann Dairy Company in Russia (Dries and Reardon 2005) has a huge network of distributors/agents spread over rural towns and cities of Russia, built mainly in the past decade.

(4) broad line distribution by rural wholesalers; for example, in Guatemala since the early 1980s have developed quickly rural-based distributors who buy in bulk in the cities from firms like Colgate-Palmolive/P&G, Kelloggs, Kern's, and Ducal, and stock their warehouses in the city each fortnight. They then use their mid-size trucks and make runs to drop off stocks at their network of smaller warehouses in rural areas and then distribute through rural towns and villages working with small shopkeepers, on a credit basis. The competition among them is intense, pushing these products further and further into rural markets.

Third, while very hardy processed foods like maggi cubes or powdered or canned condensed milk could, in the 1950s-1970s, be transported anywhere in rural areas from factories in cities or abroad, many other products like fluid milk, juices, processed vegetables, and so on, could not survive the long shipment and shelf periods in rural town markets. This situation changed

profoundly starting in the late 1980s in developing regions with the introduction of new packaging and processing/storage technologies. The key point is that processed foods can be made in domestic urban or regional factories and shipped in massive quantities to rural areas (competing with RNF supply), and this trend is only about one decade old in most places.

A striking example of the combination of a new packaging technology and milk processing method together changing the face of both national consumption habits but also the presence of a processed product in rural areas is the case of the spectacular rise of UHT (ultra-high temperature) milk sold in vacuum packed "Tetrapak"3 boxes since the late 1980s in both urban and rural Brazil, revolutionizing dairy consumption habits in rural areas, and driven by investments in particlar by Nestle and Parmalat and several Brazilian competitors (Farina 2002). Vacuum packaging by urban dairy companies has extended their reach into small towns; for example, packaged cheese from large urban processors has become omnipresent in the small shops in rural Lempira, the poorest area in Honduras (Zelaya and Reardon 2001).

4.3. To what extent do "urban-based" Retailers and Food Manufacturers, selling in rural areas, source from or just compete with local processors and services?

The effects on rural farms and firms and laborers of the above trends (the long reach of "urban-based" retail chains and large-scale processing firms into rural markets) will be conditioned by the extent to which: (1) urban-based retailers in rural areas source from local small processors; (2) urban-based food manufacturers source from local first-stage processors (such as milk collection centers); (3) the labor intensity of their technology (relative to local-based firms).

To address the first two questions, about whether the modern-sector firms source from local firms, one must first examine the objectives and practices of the processed product procurement offices of retail chains and large-scale food manufacturers operating at a national scale. As noted in Section 3, these modern food industry actors have shifted toward centralized, national and regional and even global procurement systems with preferred supplier lists and private standards. This "modernization" of procurement organization and technology is driven by: (a) fierce competition on prices and costs, of both the product and the procurement transaction; (b) aim to maximize product differentiation and quality; (c) a need for absolute consistency across time and

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3 The Swedish company Tetrapak invented a vacuum-seal package, aseptic, that revolutionized food packaging in Europe in the 1950s. In the late 1970s they started at a very small scale to penetrate markets in developing countries. The two decades of globalization, and their massive investments abroad, had a huge effect on their reach. Tetrapak sold a single sugar-cane juice machine to China in 1979 – and by 2002, just in that year, China consumers drank or ate processed food and beverages from 7.5 billion tetrapak containers, bought 184 filling machines (enough to serve millions of consumers), and just in that year increased tetrapak package purchases by 2.3 billion… In Lithuania, in 2001 a new kind of cheese packaging plant was installed by Tetrapak, making it easy to ship fresh cheese, with long shelf life, from urban factories to rural towns all over the country. In 1997 two large Tetrapak factories were set up in India.

store or distribution locations in terms of product availability; (d) a need to meet public standards and regulations (for packaged and semi-fresh product safety), including for example expiry dates, and private standards of quality and safety; (e) a need to expand product sales volume constantly as the chain spreads under the ever-present market dictum, "grow or die."

This procurement modernization is of course taking place at very different rates across products and countries and firms. However, there are certain regularities in the patterns: in particular, that modernization occurs first, and early, in processed foods among the leading retail chains and large food manufactures. For example, while the procurement of perishable foods is only now being modernized in Indonesia or Mexico or Russia, for several decades there has been centralized procurement from preferred suppliers of processed products by the leading chains, and distribution networks by major processors, in those countries (see Cook, 1987, for the case of Mexico).

Moreover, the strong, but still emerging, evidence is that modern retailers prefer to source processed food items from the largest companies available. The evidence from the processed meat, dairy products, and packaged goods sectors point generally to a rapid exclusion of small processing and food manufacturing firms in the supermarket procurement systems in developing countries. In addition to lowering transaction costs, the chains reaps economies of scale from large volumes of processed products moving through their distribution centers, and they save costs by working with larger firms that can ship to their centers or have their own distribution centers.

For example, case evidence shows that supermarket chains in China, Zambia, Russia, South Africa, Indonesia, Costa Rica, Chile, Poland, the Czech Republic, and Nicaragua tend to choose medium/large processors as their preferred suppliers and to cut back on small suppliers where larger firms can provide the needed product diversity with "one-stop shopping." Representative of those studies, Hu et al. (2004) for China note that the Xiaobaiyang chain (a local Beijing chain) went from 1000 to 300 suppliers of processed products when it went from decentralized to centralized procurement in 2003. Dries and Reardon (2005) show that supermarket and cash and carry chains in Russia tend to start with a broad array of dairy product suppliers and then cut back to a small number of large companies each able to supply a diverse line of basic commodities, a few medium firms for specialty products, and a few local smaller firms per marketing zone that have local brand recognition or a location-specific taste/consumer appeal. This is a pattern also noted in Chile (Faiguenbaum et al. 2002) for dairy and meat, and in Nicaragua and Costa Rica for meat (Balsevich et al. 2006) and dairy in Zambia (Neven et al. 2006). While a handful of examples do not establish a trend, the fact that over diverse settings one sees the same pattern, and the pattern is easily and fully explained by the economic logic of the retailers, makes it reasonable to maintain the image of scale-bias as a working hypothesis.

The issue for rural firms is that it is atypical that they satisfy either the scale requirement or the quality-niche requirement. Just a few of the best local firms are sufficient to meet the latter. By contrast, it is easy, and common, for a Nestle or a Parmalat or in Russia, a Wimbl Dann, to add a product line to its factory to satisfy a given product niche requirement of a retailer penetrating a new market, as Dries and Reardon (2005) show for kefir and cheese products in Russia. Even when a local processing firm has the needed quality, it is usually difficult for that firm to scale up

production to supply a whole chain's needs. That is not a problem when the chain sources locally, but as the chain centralizes processed product procurement (usually quite early), there is a strong logic to switch to a Nestle or a Bimbo or a Sadia or an Arcor rather than knitting together, at high transaction costs, the needed volumes from many small local RNF firms.

A similar logic, but less strongly, applies to the spatial and scale biases of the second-stage processors' sourcing from first stage processors and less still from farmers. This varies more markedly over products and countries than does the above result for retailers from second-stage processors. One sees in fact the gamut. For example, a large second stage processor like Nestle or Sadia may source from many small producers or collectors, or from just a few. That depends on the scale of suppliers, the perishability of the intermediate inputs, and transport costs and storage technologies available.

To address the third question, labor use effects of the decision of from what firms the modern-sector firms source (and with which they compete), we must control for RNF firm scale, and focus on technology, indexed by the labor/capital ratio. It is probable that those able to supply the modern retail chain or second-stage processor operating in the rural space, will be those with greater capacity to make the necessary investments in physical and human capital implied by the volume, quality, consistency, and cost requirements of the modern segment. Usually one observes a higher capital/labor ratio in the processing and service firms able to meet these requirements. Faiguenbaum et al. (2002) for the dairy segment, for example, show that these requirements can include cooling and storage equipment and packaging machinery and a vehicle in order to delivery cheese to the chain, while the local cheese market might require only rudimentary containers, no cooling facilities, and no vehicle.

It is an empirical question, with answers that will vary greatly over products, areas, and countries, whether and how much technology (in a broad sense, production-technical, managerial, commercial) needs to be upgraded for small RNF firms to fit into the procurement strategies of transforming food industry firms as the latter gradually or quickly take over tertiary urban and final rural town markets. Of course much research is needed on this topic.

But suffice it to say that for a subset of situations and products, technology upgrading of small RNF firms (and skill upgrading of RNF workers) will be necessary but not sufficient. That is, food industry firms will want to deal with larger individual firms, hence demanding an increase in scale, or with groups of small firms, acting in cooperatives or clusters.

The evidence is still barely emerging as to whether RNF firms are getting bigger, and what is driving it where it is happening. Where there have been studies, however, they are instructive. Farina et al. (2002) shows for Brazil that the above forces combined, over the 1990s and early 2000s, led to a sharp consolidation in both the dairy processing and dairy farm sectors, with increases in scale and capital/labor ratio.

There are two potential responses of small RNF firms to the above competitive, and sourcing exclusion, challenges.

The first is to individually invest, increasing the individual firm's capital/labor ratio (and potentially scale as well). While there is emerging evidence that modern retailers and processors source from firms with higher capital/labor ratios, there is no (that we know of) panel data empirical work on individual firms' investment responses to the shock of entry of modern-sector firms or products into their market-shed.

The second response is to collectively invest, increasing a group of firms' access to a collective investment (information networks, a processing plant or cooling tank, a vehicle). This may extend also to increasingly the aggregate scale, say through a marketing cooperative. There is limited, though emerging, research on this in the agriprocessing (or input manfacture) domain.

A first line of work on such collective responses is clustering. Interesting work on this has been done on leather- and wood- and cotton- using industries, mainly for the export market, in furniture, bamboo plating, and palm sugar clusters in Indonesia (Burger et al., 2001), shoe manufacture clusters in the Sinos Valley of Brazil (Schmitz, 1995), and textile clusters in Southern India (Cawthorne, 1995). To our knowledge, there has been little work on clusters of food-related RNF enterprises targeting the domestic market, and how they fare under food industry market transformation; there are a few exceptions like Dirven (2001) and KREI (2005), and general treatments in Khadka and Ichsan (2003) and Cho (2004).

Moreover, closely allied to the above point is emerging evidence that under the competitive pressures of globalization of markets, "de-clustering" is taking place. Dirven (2001) for example shows how dairy processing firms in Chile are "de-linking" from local equipment and evaluation services in rural areas or nearby secondary cities and linking to big city or foreign sources for their needs. A more fascinating story is difficult to find than the pair of papers by Schmitz (1995, 1998) which show first a major success story of shoe firms in the Sinos Valley of Brazil, selling to a global market in what he called a "super-cluster" – and then several years later that same cluster "de-clustering" under globalization pressures. There has been very little work on this extremely important topic (of de-clustering under globalization pressures) beyond these examples cited, and most of that is related to the globalizing international market. This work should be extended to domestic food industry transformation's effects on local linkages or de-linking and clustering or de-clustering.

A second line of work on collective responses is association (via cooperatives or other groupings). Moreover, there has been little work to date on how associations in the RNF sector fare in the face of domestic market transformation. This is separate from the discussion of clusters of small RNF firms. Berdegue (2001) on economic associations of small farmers, with the associations processing or marketing products, hence collective entities in the RNF sector. He shows that in Chile only 20% of these are profitable, and many are undergoing great challenges in supplying the transformed food industry such as large scale dairy firms. In various cases the effect is exit (voluntary or forced) of weaker or less efficient or committed firms from the cooperative.

4.4. Links with and Feedback Loops from Agriculture and Rural Labor

Dealing at length with the effects of food industry transformation on agriculture, or even of how RNFE changes affect agriculture, is beyond the scope of this paper, and dealt with elsewhere (see Reardon et al. 1998 and Reardon and Timmer, 2006). Here we briefly present hypotheses on how the food market transformation's effects on agriculture might feed back to the RNFE. The main channel of this feedback is via production- and consumption- linkages between agriculture and the RNFE.

The extent to which farmers are directly affected by the agrifood market transformation is a function of the degree of adoption of procurement system modernization (as discussed above) by the modern food industry firms who penetrate (or send products to) rural areas. There are several salient points.

First, as noted above, the emerging evidence points clearly to retail chains preferring larger scale processors where possible. In that sense the penetration of the rural space by modern retail chains represents a "leakage" rather than a production-linkage to the local RNFE.

Second, the evidence is quite mixed as to the scale of farmer preferred in sourcing by large scale processors. That means that our hypothesis is mixed as to whether agrifood industry transformation will favor local consumption-linkage RNFE (from small farmers) or leakages (from larger farmers with more extroverted demand patterns). Examining the participation of small farmers in contract farming schemes of agroprocessors in Latin America in the 1980s and 1990s, Schejtman (1998) and Key and Runsten (1999) find a mixed picture. Recent work in Central and Eastern Europe, likewise, shows variable outcomes, with substantial involvement of small milk producers and processors in Poland, but very low participation of small producers in Russia, Slovakia, and Czech Republic (Dries and Swinnen, 2004, Swinnen 2004). There, the exclusion of small farmers is widespread, as it is in Brazil (see Farina 2002) and Chile (see Dirven 2001). By contrasting various case studies, it is possible to identify specific conditions under which large processing firms either vertically integrate into commercial farming or instead enter into contract farming agreements with large or small farmers. In general, these studies suggest that large-scale processors rely on small farmers in cases where they must, due to lack of sufficient supply from larger firms, and where transaction costs are low enough to permit cost-effective interaction with smallholders, usually due to the existence of effective smallholder producer associations. Where the incentives are high enough, large firms have proven willing to resolve idiosyncratic market failures and provide technical assistance and input credit (Dries and Swinnen, 2004; Gow and Swinnen, 2001).

Third, the evidence is similarly also mixed as to the scale of fresh-product farmer from whom retail chains source. In general, most supermarket chains in developing countries still just source from traditional wholesale markets for their produce; only the leading chains are recently beginning to undertake preferred supplier programs. Where chains source directly, most chains attempt to source from medium or large producers if these are available, and if not, to source from small farmers. The great majority of produce sourced by supermarkets is still sourced mainly from small farmers. But controlling for scale, again, it is the upper stratum (in terms of capitalization) of small farmers that sell to supermarkets, as illustrated for various products and countries in Central America in Berdegué et al. 2006. If this is typical, it means an increase in the

production- and consumption- linkages from the upper tier of small farmers for RNFE activity. Research is needed to understand what the specific effects are.

Fourth, the effects on rural laborers and farm input suppliers may be twofold. (1) The overall impact of the direct and indirect changes in RNFE and farms, all else equal, is an increase in the capital/labor ratio. It is not a priori clear whether this will be labor-displacing or labor-augmenting. There will doubtless be many cases where the effect is labor displacing, and many where the demand increases for skilled (as opposed to unskilled) labor. (2) The general effect on the farm input supply sector (part of RNFE) appears to be in the direction of "de-linking", as shown for example in Dirven (2001) for dairy in Chile, with greater reliance on equipment and inputs "imported" into the local area.

Fifth, we expect that the condition of factor markets will influence this challenge of upgrading and linkage to the modern sector buyers. However, rather than the factor markets being either atomistic passive markets, or markets heavily conditioned by policies, it is more likely that there will be significant interaction between the conditions of the factor markets and the modern food industry.

There are three angles from which to view this. (1) The contract that an RNF firm has with a modern food industry firm can be a "collateral substitute" that can help it access the credit market. Reardon and Swinnen (2004) present a few emerging examples of this for supermarkets and fresh produce suppliers, and processing firms and milk suppliers, but to our knowledge, no work on this has been done for RNF firms as suppliers. (2) Modern food industry firms sometimes supply upgrading credit directly to suppliers, including first stage processors – or government programs such as the 'Proveedores" program by the government of Chile (see Berdegue 2002) include government credit provision in programs helping linkages between local firms and large urban firms. (3) It is common for supermarket chains to pay suppliers with a delay, sometimes quite substantial (30-90 days), and charge a fee for shelf space. These financial burdens are usually not able to be financed in the local credit market, but require retained earnings, own cash sources. Faiguenbaum et al. (2002) found in Chile that vegetable cooperatives with income sources diversified in the nonfarm sector were able to "weather" the waiting periods and thus become preferred suppliers of the supermarkets. In a sense, the retail chains finance their own expansion from the pseudo credit market and even insurance markets created by the suppliers themselves via the RNF economy! In any case, without these sources, small enterprises could not endure the fees or the waiting for payment and would not enter that market.

5. Conclusions and Implications for Rural Small-Business Development Programs

We have presented emerging evidence pointing to the transmission to developing countries' rural spaces the impacts of agrifood market transformation occurring at national and global levels. That transmission takes place via retail chains penetrating intermediate cities and rural towns, and urban-based food manufacturers selling products to those chains as well as to traditional shops.

We have presented and justified three main hypotheses concerning the impacts of that penetration.

> (1) The direct effect is that the modern retailers and modern-sector processed products directly compete with, and present potentially major challenges to, the processed foods, farm inputs, and commercial services already being undertaken in the RNFE sector by the rural poor among others.
>
> (2) The indirect effects is that modern sector firms tend, once they have "modernized" their procurement systems, to prefer larger suppliers if available, and/or small suppliers that have the requisite levels of capital assets. This further translates to a potential labor substitution bias, in particular of unskilled labor, although it may drive skilled labor demand.
>
> (3) The production and consumption linkage effects of the above impacts on RNFE firms, laborers, and farmers, all else equal, probably implies greater demand for non-tradeable goods and services in the RNFE that correspond to the demand patterns of the upper stratum of rural consumers.

We have coated this bitter pill with the assurance that these changes mean opportunities as well as substantial modernization of farming and the RNFE as a ripple effect of the transformation of the overall agrifood economy. We have marshalled the scant available evidence, emphasized the need for much new research on this, and pointed out at every turn that there is great variation over rural areas and countries and products.

But clearly we have identified a set of links and a trend that will steadily and increasingly condition the development of the RNFE – and its distribution over space and socioeconomic groups. Obviously the key worry is that the rural poor will be increasingly excluded from the RNF economy, all else equal, as this evolution continues. This will surely be a challenge, and perhaps a growing worry for, small business development programs in rural areas. Those programs are focused on "value added" opportunities for rural areas that benefit the poor.

Faced with the above, what can business development programs do? Here we will not treat the more general theme of how to promote the equitable and efficient development of the RNF economy; policy and program strategies for doing that are presented in Haggblade et al. (2006). Rather, we focus here on what programs must do beyond generic promotion of RNFE. .

First, given the change in the market context, it will be increasingly undesirable and "un-strategic", except in the most remote, hinterland areas, to maintain the separation between competitiveness and nonfarm employment programs. At least for RNF activities that supply processed products, farm inputs, and retail commerce, RNF enterprises will need to face the same general challenge that exporters in their country face on the global market, and urban firms face, which is to compete on cost and quality.

Second, maintaining the analogy to international competitiveness, it will be necessary go beyond a generic competitiveness approach, to employ a "customized competitiveness" strategy (a term

used by Reardon and Flores 2006 for export programs, but applicable here). Such an approach focuses on understanding the specific requirements of transformed markets and building the capacity of particular groups to respond to those requirements (as suppliers) or match cost and quality and compete for specific niches. The capital assets that programs should building include market intelligence capital, organizational capital, technology capital, and financial (and risk reduction) capital.

A good example of an integrated approach to such competitiveness for local RNF firms to supply retail chains in rural towns and intermediate cities is the program by the State of Paraná in Brazil, with the World Bank. The program targeted small food preparation/processing enterprises on the supply side, and retail chains in rural towns on the other, and undertook several steps: (1) built market intelligence capital for the women running the prepared foods firm by having them meet with chains and attend local trade shows; (2) built organizational capital in several ways – by helping the municipal and state governments to streamline their business registration system, helping the women to get their firms registered, and helping the women to organize to effectively supply the chains; (3) built technology capital by training (via involvement of the government extension service) the women product preparation and packaging procedures that would meet the quality and safety norms of the chains; (4) helping the women to access loan programs to capitalize their firms (Del Grossi and da Silva, 2001).

A warning note should be sounded, however. Increasingly popular is the aim of RNFE promotion programs to build a "label" for a local product, and beyond a mere brand, to attempt to sell the product in the national market with the analogy to a "fair trade" label, emphasizing the geographic origin, that the product is produced by small enterprises, and other attributes. This is indeed a trend in marketing in Europe (see Barjolle and Sylvander, 2002). However, there is probably a far smaller opportunity to market products in domestic markets with these sorts of labels, simply because most of the consumers are focused on cost, recognizable brands that imply food safety, and quality. Moreover, in general, neither retailers nor processing companies can "handle" a wide assortment of special attribute labels. In any case, with or without a special label, the products and services will be subjected to the same screening on cost and quality as non-labeled products.

Finally, we have emphasized that in the economic transformation, this time in the rural space, the poorest, those with least assets, are again vulnerable. Special attention should be paid to equipping those households and firms to participate in the increasingly challenging rural nonfarm economy.

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