Outward-looking development in Costa Rica: opportunities and problems for small farmers in the early 2000s

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1. INTRODUCTION

Costa Rica is a small Central American country with 4.5 million inhabitants and an area of 51,000km2 (INEC, 2009) (1). This developing country has a strong agricultural sector which is regarded as one of the most competitive in the region. Costa Rica has been generally accepted as a successful example of outward-looking developmentof agricultural diversification and booming NTAEs among less developed countries, especially in Central America (Kay, 2006; Pomareda, 2006) (2). During the early 1990s and early 2000s the overall economic strategy based on trade liberalisation and foreign direct investment (FDI) attraction, was particu-

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(1) Costa Rica is one of the most stable democracies in Latin America. The army was abolished in 1948. Since the early 1950s state expenditures previously devoted to the military have been channelled towards economic and social development.

(2) This paper defines outward-looking development as the set of neoliberal agriculture policies implemented in the majority of low-income countries since the early 1980s. These policies see the globalisation of agriculture as a window of opportunity for small farmers to become exporters in developing countries. The main features of this approach are: a) the liberalisation of agricultural trade; b) the promotion of non-traditional agricultural exports (NTAEs) by shifting traditional small-scale production to more profitable and diversified NTAEs (e.g. contract farming, alliances with supermarkets, agricultural conversion programmes); c) internal deregulation by dismantling subsidies and other incentives for small farmers and basic grain production; and, d) the enhancement of rural non-farm activities (RNFA) as an additional source of income for small farmers to engage in more lucrative activities and sectors (Botella Rodríguez, 2012b; World Bank, 2008).

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larly successful at diversifying the export structure. The new strategy also reduced the country's long-standing dependency on traditional export agriculture and attracted FDI in secondary and tertiary activities with significant opportunities in rural non-farm activities (RNFA) and contract farming. Since 1990, Costa Rica has promoted an important expansion of agricultural exports (particularly NTAEs), which represented 33% of total exports of goods in 2008. Agriculture alone generated approximately a 10% share of GDP in the same year. If forward and backward linkages of agriculture with agro-industry, the food industry and the fertiliser industry are considered, primary activities represented a 32% share of GDP in 2008 (IICA, 2006).

Yet, outward-looking policies subordinated agriculture sector policies to the overall economic model; productive conversion programmes and rural development strongly supported NTAEs and agroindustrial growth. These developments transformed the internal dynamic of the sector from a social and productive perspective. Support for traditional small farming (both private and public) was progressively dismantled during the 1990s and early 2000s with the subsequent impact on national food production and small farms engaged in basic grains and other traditional crops (Pomareda, 2002; SEPSA, 2002a, 2005) (3).

In Costa Rica, small farmers usually cultivate small plots devoted to coffee, sugarcane and basic grains. There is not a standard size of this kind of farm. They range from 8 to 20ha depending on regions and crops farmed (4). In the case of basic grains, producers usually cultivate much smaller

(3) To understand the impact of this strategy on production patterns, land structures and food production see Botella-Rodriguez, 2012b, 2014. For further analysis on the impact of outward-looking development on poverty levels and especially on rural poverty see Botella-Rodriguez, 2012a; Estado de la Nación, 2005, 2006; MIDELPLAN, 2007; Viales, 1999; for comparative analyses of the Central American region also see Estado de la Región, 2003.

(4) The paper uses several terms to describe these production units, including small holders, small farmers, small producers, and peasants. These units are based on family labour with limited access to basic assets (mainly capital). According to the 6th Agriculture Census (2015) average farm size in Costa Rica is 25.9ha; Guanacaste presents the highest average size with 54.6ha versus Cartago with the smallest average farm size of 9.7ha. The census also shows the legal situation of farms owners: 87.1% are physical owners (individuals) and 11.7% are managed by different types of societies. In terms of land use, individual owners manage 54.7% of total cultivated ha and societies 42.5% (INEC, 2015).

plots than traditional crop farmers (between 4ha and 2ha for maize and beans). In other cases and regions, small farmers combine basic grains for subsistence and traditional crops for domestic or export markets. Sáez-Segura (2006) differentiates two types of producers within the family farm sector: 1) a more traditional *peasant sector* that gathers low-income farmers living in former agrarian frontier zones and in rural settlements created by the Agrarian Development Institute (IDA); and, 2) an important group of *commercial farmers* that produce both traditional crops (coffee, bananas, sugar cane) and non-traditional crops (tropical fruits, vegetables, ornamental plants).

Researchers face many problems when analysing the small farming sector in Costa Rica. Detailed literature on agricultural policies and their impacts on small farmers in Costa Rica is limited and only available for specific regions for the period under research (1990-2008). There are some MAG and SEPSA studies on the agricultural patterns that emerged under the economic model of the 1990s and early 2000s (5). These studies analyse the reduction in resources and civil servants of agriculture institutions and the promotion of agricultural conversion programmes as well as rural development in Costa Rica. However, they do not focus on the impacts of these policies on the small farming sector (6a). Semi-structured interviews, visits to different regions and proxy variables were the methods used to overcome the lack of census data from 1990 to

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(5) For example in 2009 Costa Rica lacked secondary sources and recent data on land ownership. The lack of a national agriculture census from 1990 to 2008 (the last one was developed in 1984) made the analysis of the impact of outward-looking development on small farmers at the macro level challenging. The 6th agricultural census, just released in May 2015, aims to provide an updated directory of farms to guide future agriculture policies in Costa Rica (INEC, 2015).

This research focuses on 1990-2008: in 1990 Costa Rica became a member of the General Agreement on Tariffs and Trade (GATT/World Trade Organisation, WTO), liberalising agriculture to a greater degree, further promoting NTAEs and attracting FDI (and thereby TNCs) in agriculture. In 2008 Costa Rica was badly affected by the global food crisis given the high degree of basic grains imported.

(6a)The combination of various methodological approaches mainly qualitative and quantitative methods, several data sources available for different periods, investigator and analysis methods were used to analyse opportunities for small farming in Costa Rica. This process of research triangulation aimed to increase the validity of different data sources although they gathered information for different periods between 1990 and 2008 (Yeasmin & Rahman, 2012).

2008 (6b). These data were later connected to agricultural policies to discuss the relationship between inputs (agricultural policies) and outputs (opportunities for small farmers) in Costa Rica from 1990 to 2008.

Accordingly, this paper discusses some of the opportunities and problems created for small farmers by Costa Rica's new agriculture strategy from 1990 to the early 2000s. Within the context of the key dimensions of small farming production (7), the paper is divided into five sections. Section two evaluates income and employment opportunities for small farmers generated by the new patterns of agricultural production and land structures in Costa Rica. Qualitative studies and the author's calculations of incomes per capita according to traditional and non-traditional crops are employed to analyse the general income patterns followed by Costa Rican small farmers. This section also discusses general trends in rural non-farm employment (RNFE) and how they impacted small farming livelihoods strategies. Section three discusses the opportunities created for small farmers and NTAEs producers to increase national production and improve average yields. Given the lack of specific data on productivity levels per type of producer in Costa Rica, growth rate differentials between traditional crops (usually produced by small farmers), non-traditional crops and averages for the main agricultural crops are used to undertake the analysis. Concentrating on the Northern region of Costa Rica where 90% of producers were small holders, this section also presents an example of the strategies smallholders adopted in this region to ensure their long-term engagement in agricultural production (INEC, 2000; Rodriguez & Avellanedo, 2005; Trejos, 2008). Section four goes on to analyse whether the new patterns of agriculture production and land structures enlarged or reduced opportunities for small producers to improve national food security. In doing so, the section discusses the dismantling of

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(6b) For example, visiting regions where NTAEs were heavily promoted, others where basic grains were still very important (e.g. Brunca), and regions where both traditional and non-traditional sectors coexisted (e.g. Northern Huetar) was one of the principal means the author used to overcome the basic lack of data in Costa Rica. In addition to these methods, the research gathered regional agriculture censuses for specific years and products and regional studies on small farming in Costa Rica.

(7) Drawing on the literature on agrarian development and small farming (for example, Altieri, 2008; Eastwood et al., 2010; Ellis, 2005; Ellis & Biggs, 2001; Griffin et al. 2002; Hazell, 2011; Hazell et al., 2007; Kay, 2006; Lipton, 2005; Nagayets, 2005; Rosset, 1999), the paper considers three specific opportunities for small holders: 1) the employment and income opportunities derived from diverse agricultural strategies; 2) the potential for increasing small farming production and productivity levels; and, 3) the opportunities to ensure national food security.

basic grains production and the extent to which small cereal producers were economically and socially displaced from national food production from the early 1990s. The section then explores the evolution of Costa Rica's food import dependency during the period 1990-2008, stressing the increasing ratios of imported food in the majority of food groups available for national consumption. The last section summarises some of the achievements and failures of outward-looking development in the promotion of small farming in Costa Rica.

2. INCOME AND EMPLOYMENT OPPORTUNITIES FOR SMALL FARMERS IN THE EARLY 2000s

During the period 1990-2008, the percentage of Costa Rica's economically active population (EAP) engaged in primary activities declined from 25.3% to 12.3%. During the same period, the unemployment rate in agriculture almost doubled from 2.5% to 4.4% (SEPSA, 1997a, 2008). The level of employment in Costa Rican agriculture varied seasonally, showing high levels of underemployment and widespread reliance on family labour. The stability of the agricultural workforce also varied and the increasing desire to avoid social security payments augmented the number of seasonal, undocumented and unskilled workers (principally migrants from Nicaragua) (Mora-Alfaro, 2005; SEPSA, 2005a, 2005b). NTAEs promotion and agroindustrial development created employment opportunities for rural workers, landless and small producers in agribusiness and RNFA in rural Costa Rica. Yet, the lack of new, adequate and well remunerated sources of employment in traditional agriculture generally spread across Costa Rica from the early 1990s. These trends not only affected agrarian workers, they also reduced income and employment opportunities for small farmers with difficult access to markets and other basic assets. Within this context, the following sections discuss the types of income and employment opportunities created by outward-looking development for Costa Rican small farmers between 1990 and 2008.

2.1. Employment opportunities in agriculture for small farmers

In the early 1980s, small farmers represented 40% of the economically active population engaged in agriculture and owned 24.3% of Costa Rica's

farming land (INEC, 1984, 2000; Rovira Mas, 1987) (8). Considering the distribution of the population employed in agriculture by type of employment, data compiled by INEC (2000) show that during the period 1973-2000 landowners increased from 0.76% to 3% and unskilled workers grew from 59% to 63%. Managers and supervisors (from 0% to 0.2%) and skilled workers (from 0.64% to 1.8%) also increased over the same period. The only group that decreased during the period 1973-2000 was small farmers. They fell from 39.6% to 32% of the EAP employed in agriculture and experienced the most significant decline in percentage terms (see Table 1). Nevertheless, this group still represented nearly one-third of the total population employed in agricultural activities in 2000 (32%).

Table 1

DISTRIBUTION OF THE EMPLOYED POPULATION IN AGRICULTURE PER SOCIAL GROUP IN VARIOUS POPULATION CENSUSES: 1973-2000 (PERCENTAGE TERMS)

Social group	Population census		Differences (2000-1973)
	1973	2000	
Total employed population in agriculture activities	210,587	291,756	
AGRICULTURE ACTIVITIES	38,83%	21.7%	
(% of total employed population)*	100%	100%	
Landowners (finqueros/large producers)	0,76%	3%	2.24
Unskilled workers	59%	63%	4
Small farmers	39,6%	32%	**-7.6**
Managers and supervisors	0%	0,2%	**0.18**
Skilled workers	0,64%	1,8%	**1.2**
TOTAL	100%	100%	

Source: Based on Rodriguez & Avedaño, 2005; INEC, population census, 1973, 1984, 2000.
* Including agriculture, forestry, hunting, and mining and quarry exploitation.

(8) This section discusses employment opportunities of small farmers in Costa Rica. The section is based on Rovira Mas (1987) that presented a disaggregated analysis per different groups of producers and workers engaged in agriculture activities. A more updated disaggregated analysis can be found in Rodriguez & Avedaño (2005) based on INEC population census of 1973, 1984, 2000. Updated censuses for 2009-2011 provide employment data per crops, sector, sex and activity (INEC, 2011). However, this paper required a more disaggregated analysis as the one presented by Rodriguez & Avedaño, 2005. More updated data on employment opportunities for small farmers presented by CEPAL is also explained in this subsection.

More updated data by CEPAL (2004) consider self-employed and unremunerated workers (neither professionals nor technicians) in agriculture, forestry and fisheries as proxy variables for small producers (9). Using these proxy variables, more recent data on the employed population in agriculture per group show negative compound annual rates of growth for self-employed workers (-6.63%) and unremunerated workers (-11.18) from 2004 to 2008. By contrast, agricultural employers and employees experienced positive compound annual rates of growth during the same period (see Table 2).

Table 2

EMPLOYED POPULATION IN AGRICULTURE PER GROUP, 2004-2008

Groups	2004	2008	CARG* 2004-2008 (%)
Employers *(Patronos)*	21,623	23,900	2,53%
Self-employed workers	65,086	49,470	-6.63%
Employees	142,491	158,227	2.65%
Unremunerated workers	16,128	10,035	-11.18%
Total	245,328	241,632	-0.4%

Source: SEPSA, 2007.

* Compound annual rates of growth.

Regarding the degree of engagement of Costa Rican small farmers in NTAEs during the 1990s and 2000s, qualitative investigations and specific case studies (e.g. Saéz-Segura, 2006 on pepper and *chayote* value chains) show that some opportunities were created for small producers, self-employed and non-remunerated workers in certain regions in Costa Rica (MAG, 2012; Pomareda, 2004, 2006) (10) However, the results of these studies cannot be generalised for the whole economy. INEC data show that NTAEs employed 15.8% of the agricultural workforce in Costa Rica

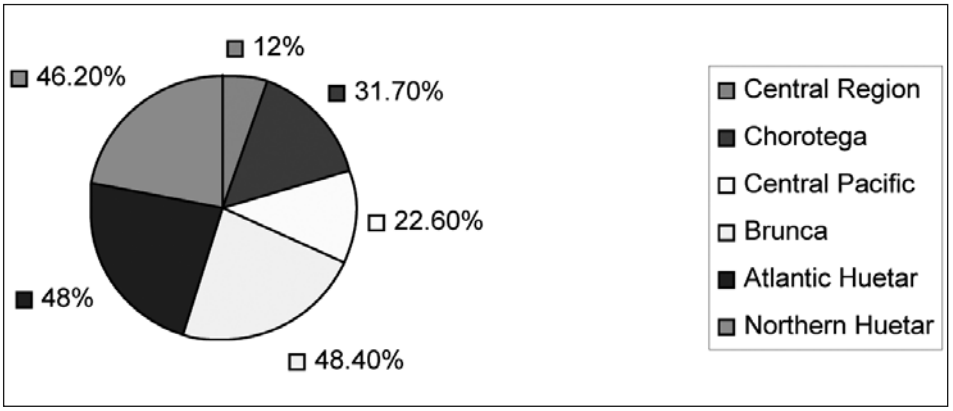
(9) To overcome the lack of data on small farms the author considered non-remunerated and self-employed workers as a proxy variable for small farmers for the period 2004-2008 (as mentioned above, this proxy is also recognised by CEPAL).

(10) The new agriculture census (just released in May 2015) per regions and sectors might provide useful evidence to understand these trends during the last decade, from 2005 to 2015 for example. The 6th agriculture census is disaggregated per different crops, basic grains, coffee, fruits etc. These crops must be grouped in traditional and non-traditional crops to present the same picture discussed in this paper.

in 2000. On a regional level, NTAEs accounted for 26.5% in the Central region, 12.3% in the Chorotega region, 45.13% in the Central Pacific region, 10.33% in the Brunca region, 11.4% in Atlantic Huetar, and 15.6% in the Northern Huetar region (INEC, 2000; Trejos, 2000). These data do not demonstrate the degree of engagement of small farmers in these activities. However, engagement in NTAEs was lowest in the regions with large small holder populations. This was the case in the Brunca, Atlantic Huetar and Northern Huetar regions (e.g. 90% of producers in the Northern Huetar were small farmers in 2000) where only a small proportion of the people employed in the agriculture sector were engaged in NTAEs (see Graph 1).

Graph 1

EMPLOYED POPULATION IN PRIMARY ACTIVITIES BY REGION, 2000



Source: Author's elaboration from INEC, 2000, Trejos, 2000 & SEPSA, 1997b, 2004

In sum, the relationship between evidence available for two different periods (INEC, 1980-2000 and SEPSA, CEPAL for 2004-2008) on employment per sector seems to indicate that outward-looking development created limited opportunities for small farmers from 1990 to the early 2000s. Whereas small farmers' participation in agricultural activities decreased, the percentage of unskilled workers in agriculture grew during the 1990s and early 2000s. Moreover, employment opportunities in NTAEs seemed to be less significant than is generally assumed. In 2000, these activities employed 15.8% of the agricultural workforce in Costa

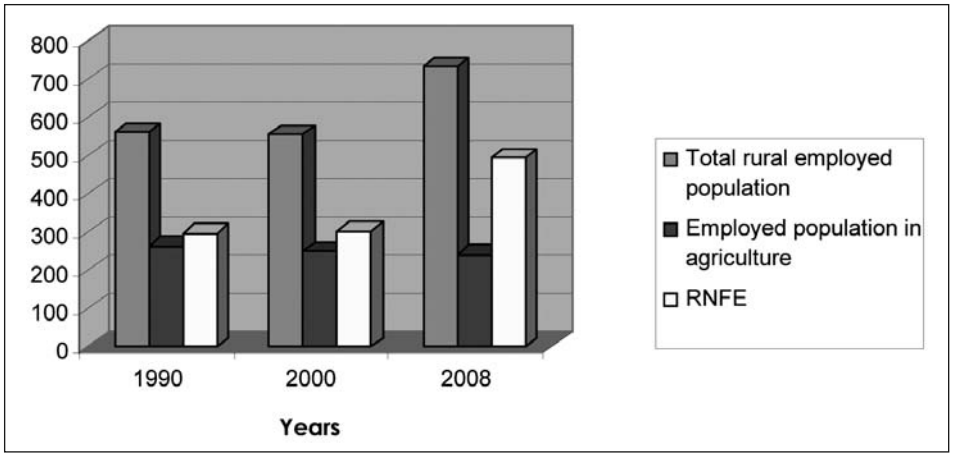
Rica where 71% of national producers were small and medium farmers, generally unremunerated or self-employed workers (Barrantes, 2006; INEC, 2000; Trejos, 2000).

2.2. Rural non-farm employment (RNFE): opportunities for small farmers?

Trade related services and agroindustries linked to booming NTAEs became the principal source of employment in rural Costa Rica during the period under investigation (IICA 2006; Pomareda, 2004; Mora-Alfaro, 2005). Whereas agriculture progressively offered fewer opportunities for family farmers as the main source of income in rural Costa Rica, RNFA began to diversify activities and employment for rural inhabitants. These activities also provided new income sources for small holders who were unable to obtain sustainable incomes from primary activities (MAG, 2012; Pomareda, 2004, 2006). From 1990 to 2008, the total employed population in rural areas experienced a compound annual rate of growth of 1.52%. Whereas the compound annual rate of growth for the employed population (EP) in agriculture was minus 0.48%, RNFE showed a compound annual rate of growth of 2.87% (see Graph 2) (INEC, 2009; SEPSA, 1997b, 2004).

Graph 2

RURAL LABOUR FORCE 1990-2008 (1,000)



Source: Author's elaboration from INEC, 2009 & SEPSA, 1997b, 2004

Dirven shows that the weight of RNFE employment in Costa Rica was the highest in Latin America in the mid-2000s (see Table 3). RNFE accounted for 65.8% of the employed population in rural areas in 2004 compared to 34% and 51.9% in Chile and Mexico respectively (2004).

Table 3

LATIN AMERICA'S RNFE AND AGRICULTURE EMPLOYMENT IN RELATION TO THE TOTAL RURAL POPULATION IN 2004 (IN PERCENTAGE TERMS)

Countries	Agrarian activities/total rural	RNFE/total rural
Bolivia	85.5%	14.5%
Brazil	73.4%	26.6%
Chile	66.0%	34.0%
Colombia	56.4%	43.6%
Costa Rica	**34.2%**	**65.8%**
El Salvador	50.8%	49.2%
Honduras	59.1%	40.9%
Mexico	48.1%	51.9%
Nicaragua	66.0%	34.0%
Panama	48.8%	51.2%
Paraguay	62.6%	37.4%

Source: Dirven, 2004.

In Costa Rica RNFE varied from commerce, agricultural related services, and inputs delivery to ecotourism and agrotourism activities. Forward and backward linkages of agriculture with hundreds of agricultural input stores, veterinary centres, mechanic workshops, electronics shops, and transport services established in rural areas generated new sources of employment for rural workers from the early 1990s. Processing, packing and other intermediate activities linked to NTAEs became the motor of local rural economies in contemporary Costa Rica (Pomareda, 2006, 2009). As shown by Table 4, in 2000, secondary activities employed between 11.5% and 26.8% of the economically active populations of Costa Rica's six regions. More importantly, tertiary activities ranged from 39.9% of the em-

ployed population in Northern Huetar region to 62.8% in the Central region. Considering the high percentage of the economically active population who lived in rural areas in each of Costa Rica's six regions, these new activities may have created opportunities for those family farmers (unremunerated and self-employed workers) who decided to diversify their livelihood activities within the household (Rodriguez & Avedaño, 2005).

Table 4

STRUCTURE OF THE EMPLOYED POPULATION PER ECONOMIC SECTOR AND REGION, 2000 (IN PERCENTAGE TERMS)

Indicator	Central Region	Chorotega	Central Pacific	Brunca	Atlantic Huetar	Northern Huetar
Total employed (1,000)	902,5	81,8	61,9	86,4	108,2	60,7
Rural index (percentage of active population that live in rural areas)	**26%**	**61%**	**46%**	**72%**	**63%**	**80%**
SECONDARY ACTIVITIES	**26.8**	**15.9**	**22.9**	**11.5**	**11.7**	**13.9**
Manufacturing	20.0	9.5	16.1	7.3	7.5	9.6
Food industry	4.6	5.3	8.3	3.4	3.1	4.2
TERTIARY ACTIVITIES	**62.8**	**52.4**	**54.5**	**40.1**	**40.3**	**39.9**
Production-related services (financial and estate agency services)	9.0	3.3	3.2	2.9	4.2	2.9
Personal services (hotel, tourism services, restaurants etc.)	14.0	15.0	18.5	8.7	8.7	10.1

Source: Author's calculation from INEC, Population Census, 2000.

However, it is difficult to determine the importance of RNFE for small farmers during the period under investigation. While there is no quantitative evidence available to demonstrate the degree of engagement of small farmers in these activities, qualitative studies show that RNFE created opportunities for small producers, self-employed and non-remunerated workers in Costa Rica (MAG, 2012; Pomareda, 2004, 2006). This was the case of smallholders with farms of less than 3ha, usually located on hillsides and practicing rainfed agriculture (outside of the Central Valley) (Pomareda, 2002). This group, who lived on the border of poverty in rural Costa Rica, did not totally depend on crop sales for their income, even in the case of coffee growers. RNFE was a common practice for this

category of small farmers and landless workers. The small size of the country and good infrastructure allowed them to commute for daily and weekly jobs in RNFA. However, rural non-farm incomes were not sufficient to improve their precarious situation (Arias, 2005; González Mejía, 1997; Pomareda, 2002). The growth of RNFE seemed to enable some small holders to diversify their activities, but it also appeared to have a contradictory effect on their long-term survival. Higher employment opportunities in RNFE appeared to lead some small holders to abandon agriculture. In other cases, poor and isolated small holders seemed unable to engage in RNFA due to structural asymmetries and regional problems in accessing these activities.

In sum, RNFE reorganised the structure of Costa Rica's rural labour force, generating high levels of employment for rural inhabitants, poor small farmers and (unskilled) workers, particularly in areas outside of the Central Valley. The new labour structure embraced managers, engineers (skilled workers), foreman, plant personnel, agricultural workers unskilled, technical services providers and accountants. This created a number of job opportunities, a more diversified income stream and a varied salary scale for unremunerated and self-employed workers in rural areas (INEC, 2009; Morales & Castro, 2006). Yet, RNFE seemed to have a contradictory effect on small producers. Engagement within these activities may have led small holders to abandon agricultural production and sell their plots to much larger producers and TNCs. In other cases, structural asymmetries, poor infrastructure in rural areas and/or lack of skills may also have hindered small holders' opportunities to secure access to RNFA and diversify their income streams. Overall, there is not sufficient data available to evaluate which of the three effects was the most important in the case of Costa Rican small farmers.

2.3. Income opportunities for small farmers (11)

From 1990 to 2008 income opportunities in Costa Rica's agricultural activities varied according to different sectors and types of producers. Po-

(11) Qualitative studies and the author's calculations of incomes per capita according to traditional and non-traditional crops were employed to describe the general income patterns followed by Costa Rican small farmers.

mareda (2002) distinguishes three groups of producers with highly differentiated income levels engaged in agricultural activities during the early 2000s. The first group was formed of landless workers and smallholders who lived on the border of poverty. They owned farms of less than 3ha (usually located on hillsides), practiced rainfed agriculture (outside the Central Valley) and depended on non-farm incomes (Arias, 2005; González Mejía, 1997; Pomareda, 2002). The second group were small and medium size farmers with plots ranging from 3ha to 10ha who shifted to non-traditional crops and obtained profit margins that varied considerably (Barrantes, 2006; Pomareda, 2002). According to Pomareda (2002), the magnitude of net income per hectare in this segment was in the following descending order: ornamentals, vegetables, pineapple and banana. Within this group, there were also farmers engaged in traditional crops like coffee, sugar cane, rice and milk production. Farms devoted to dual-purpose cattle were among the least profitable. In the case of rice, 7ha plots with irrigation systems provided higher incomes than average medium-sized farms (CORFOGA, 2000; Pomareda, 2002). The third group were larger farms and TNCs usually producing African palm, pineapple, banana and other non-traditional crops who obtained substantial incomes.(12)

Table 5 shows average income levels for NTAEs and traditional activities in 2002. Pineapple (US$789,237.6), banana (US$310,150), melon and water melon producers (US$545,454.5) obtained the highest average income per producer in 2002. This is not surprising. These areas of non-traditional crops cultivation were overwhelmingly controlled by a few TNCs and large producers. Obviously, income per company was much higher in the sectors where only a small number of companies were present. Average income levels in these sectors therefore do not necessarily say anything about the income opportunities for small holders in NTAEs. Yet, these data at least show the existence of a few companies that specialise in NTAEs production and generate very high income levels.

(12) The incomes of those companies directly engaged in exporting crops have significantly increased. There has been an important diversification process, ranging from raw materials, fresh and processed products, creating a better risk management environment for these companies (Conroy et al., 1996).

Traditional sectors had a much larger presence of small farmers than non-traditional crops. As shown by Table 5 these activities obtained much lower average incomes per producer in the early 2000s than those obtained by non-traditional producers (Bertsch, 2004, 2006; SEPSA, 2003). Although sugarcane and coffee attained significant total incomes in 2002 (US$170 and US$27 million respectively), average income per producer were US$2,361.1 in the case of coffee and US$3,138.8 for sugarcane producers. In the case of basic grains, the situation was even worse: 12,700 farmers, the majority small producers, experienced significant net income losses in 2002 (see Table 5) (Bertsch, 2004, 2006).

Table 5

COMPARISON OF (TOTAL AND AVERAGE) INCOMES PER SECTOR CONSIDERING THE NUMBER AND TYPE OF PRODUCERS IN 2002

Crops	Total Incomes (US$ million)	Total number of producers (including TNCs, large, medium and small farmers)	Average incomes per producer*
Coffee	170	72,000	US$2,361.1
Banana	495	1,596	US$310,150
Sugarcane	27	8,602	US$3,138.8
African Palm	36	1,901	US$3,138.8
Orange	32	4,055	US$7,891.4
Pineapple	176	223	US$789,237.6
Melon and Watermelon	60	110	US$545,454.5
Mango	3.4	1,317	US$2,581.6
Palmetto hearts	24	1,272	US$18,867.9
Chayote	10	376	US$26,595.7
Yucca	28	2,270	US$12,334.8
Roots	17	2,713	US$6,266.1
Rice	-12	700	-US$17,142.8
Beans	-18	9,000	-US$2,000
Maize	-60	3,000	- US$20,000

*Source: S*EPSA, 2003. Bertsch, 2006.

*Author's estimation from SEPSA, 2003 and Bertsch, 2006.

More specific data from CEPAL (2004) show the extent to which the implementation of outward-looking development (and its changing produc-

tion patterns and land structures) affected the incomes obtained by small farmers during the 1990s and early 2000s. Considering the incomes obtained by self-employed and unremunerated workers, (whom, according to CEPAL, can be grouped together as small rural producers) Berdegué & Schejtman (2008) show a significant increase in poverty levels within this group in Costa Rica during the 1990s and early 2000s. As shown by Table 6, between 1990 and 2000 the difference between the percentage of poor small farmers and the percentage of poor rural households improved in five countries. Differences ranged from a relative decrease of poor small farmers of 12 percentage points in Dominican Republic to 1 percentage point drop in Venezuela and Bolivia. During the same period, in eight countries differences between the percentages of poor small holders and rural poor worsened. Costa Rica experienced the worst result in Latin America with a relative increase of 22 percentage points of small rural producers in poverty (Berdegué & Schejtman, 2008; CEPAL, 2004).

Table 6

LATIN AMERICA: INCIDENCE OF POVERTY AMONG SMALL FARMERS (DIFFERENCES BETWEEN % OF POOR SMALL FARMERS AND % OF POOR RURAL HOUSEHOLDS) 1990-2000 (IN PERCENTAGE POINTS)

Country	1990	2000
Costa Rica	**0**	**+22**
El Salvador	+8	+17
Guatemala	-2	+5
Honduras	+2	+5
Nicaragua	+6	+10
Panama	+6	+21
Bolivia	+10	+9
Brazil	+3	-2
Chile	-16	-6
Colombia	+13	+3
Paraguay	+5	+7
Peru	+4	+4
Dominican Republic	+3	-9
Venezuela	-11	-12

Source: CEPAL/PMA, 2004; Berdegué and Schejtman, 2008.

In short, the evidence offered in this section shows the extent to which income opportunities for small farmers engaged in agricultural activities derived from outward-looking development were limited in Costa Rica in the early 2000s. Whereas large farms and TNCs obtained significant incomes from NTAEs, small farmers experienced a significant reduction in the incomes they secured from traditional crops and basic grains. This group of basic grain producers was particularly badly affected by the lack of incomes from these activities, falling into poverty in many cases during the early 2000s.

3. AGRICULTURAL PRODUCTION AND PRODUCTIVITY LEVELS FOR SMALL FARMERS IN THE EARLY 2000s

Focussing on specific crops and types of producers, this section discusses the impact of outward-looking development on small farmers' opportunities to increase production and productivity levels. The analysis of production levels per crop exhibit the same trends as the changes in the use of land (the shift from traditional to non-traditional crops). The second part of the section deepens the analysis by focusing on production and productivity opportunities for small holders in the Northern Huetar region. The Northern Huetar was selected because both NTAEs production and small holders were widespread in the region.

3.1. Opportunities for small farmers to increase production and productivity levels (13)

Total production levels per crop (1,000 metric tonnes) from 1990 to 2008 illustrate the general shift from traditional and basic grains production to NTAEs. As illustrated by Table 7, the total production levels of the crops farmed by small producers like coffee (-1.94), beans (-6.46%), rice (-3.63%) and maize (-7.7%) showed negative compound annual rates of growth from 1990 to 2008.

(13) To overcome the lack of specific data on productivity levels per type of producer in Costa Rica, the author considered different proxies variables to estimate production and productivity levels. Differences between traditional and non-traditional crops production and productivity levels and the author's calculations on average farm size per type of crop were employed.

Table 7

PRODUCTION OF MAIN AGRICULTURAL CROPS (1,000 MT)

CROPS	1990	2008	CARG (1990-2008) %
TRADITIONAL CROPS			
Banana	85,906 (1,000 boxes)	1,883.36	
Cocoa	3.5	0.6	-9.33
Coffee	803.4	564.95	-1.94
Sugarcane	2,437	3,596.72	2.18%
Tobacco	1.72	0.08	-15.7
BASIC GRAINS			
Rice	217.6	111.79	-3.63%
Beans	34.3	10.3	-6.46%
Maize (white)	66.0	15.62	-7.7%
NON-TRADITIONAL CROPS			
Strawberry	1.75	4.02	4.73%
Mango	8	50	10.72%
Melon	48.6	197.27	8.1%
Oranges	110.7	278	5.25%
Papaya	16.44	58.41	7.3%
Pineapple	95.9	1,678.12	17.23%
Chayote	21.84	44	4%
Palmetto hearts (1,000)	9.5	10.51	0.56%
Plantain (1,000 racimos)	2.52	85.17	21.6%
Tomato	10.41 (1991)	45	8.47%
African palm	333	863.2	5.43%
Pepper	0.87	1	0.8%
Ñame	31.01 (1991)	25.54	-1.07
Ñampi	1.7 (1991)	3.7	4.41%
Tiquisque	32.15 (1991)	16.91	-3.5%
Yucca	46.38	97.85	4.23%
LIVESTOCK (1,000 MT))			
Beef	87.48	87.52	0.002%
Milk (litres)	429	890	4.14%
Pork	14.28	51.85	7.43%
Poultry	43	106.6	5.17%
Eggs (units)	293	522	3.26%

Source: SEPSA, 1990, 2008.

In the case of staple crops, the lack of state support, limited commercialisation and production channels, and other structural problems cut small farmers' opportunities to place their production in national and international markets. At the same time, private companies from developed nations, favoured by grants and subsidies, assumed the role of commercialising cereal imports. These factors were reflected in the long-term trend of basic grains production in Costa Rica. Between 1970 and 2007, cereal production in kilograms/person/day declined at a much faster rate in Costa Rica than elsewhere in the Central American region (see Table 8) (FAO, 2007).

Table 8

CENTRAL AMERICA: BASIC GRAINS PRODUCTION PER INHABITANT (KILOGRAMS/PERSON/YEAR) (1970-2007)

Countries	1970	2007	Difference (2007-1970)
Guatemala	170	111	-34.6
El Salvador	156	126	-19.3
Honduras	164	114	-30.6
Nicaragua	181	183	1.1
Costa Rica	**96**	**47**	**-51.4**
Panamá	128	100	-21.5
TOTAL	156	125	-19.8

Source: FAO, 2007.

In contrast to traditional crops, total production levels for non-traditional crops experienced positive compound annual rates of growth from 1990 to 2008 (Mora-Alfaro, 2005; SEPSA, 2009). Most notably: pineapple (17.23%), yucca (4.23%), African palm (5.43%) and strawberries (4.73%). These trends reflected the high level of production and export diversification achieved in Costa Rica during the period under investigation. In the case of livestock, responding to international market trends and subsidised cereal imports, poultry and pork production experienced important compound annual rates of growth (5.17% and 7.43%, respectively) from 1990 to 2008. During the same period, beef production, which was mainly undertaken by small farmers, virtually stagnated (see Table 7) (SEPSA, 1990, 2008).

The analysis of productivity levels in Costa Rica is more relevant and important than the evaluation of production levels. Yields (metric tonnes/ha) per different crop provide a much better gauge of development opportunities for small farmers than production levels. In Costa Rica the lack of data on different types of farms hinders the comparison of yields between small and large producers. However, taking into consideration average yield per crop (metric tonnes/ha) and average farm size per crop (based on SEPSA data for 1990-2008 and RUTA-AECID-FAO, 2007), Table 9 shows the relationship between the types of producers per sector and the

trends in compound annual rates of growth of yields (metric tonnes/ha) during the period 1990-2008. The yields for crops largely produced by small and medium farmers, such as cocoa, coffee, and rice, experienced lower compound annual rates of growth than the average compound annual rate of growth for main agricultural crops. Although the average yields of crops oriented towards local markets and produced by small/medium farmers generally experienced lower compound annual rates of growth than the average from 1990 to 2008, there were some exceptions in the case of sugar cane, maize and beans (see Table 9). Considering yields for non-traditional crops, most of them experienced higher levels in terms of compound annual rate of growth than the average compound annual rate of growth for main agricultural crops. This was the case for pineapple, melon, oranges and African palm. Yucca was the only non-traditional crop that achieved lower than average levels during the period.

Table 9

RELATIONSHIP BETWEEN TYPE OF PRODUCERS PER SECTOR AND TRENDS IN CARG OF YIELDS (MT/HA), 1990-2008

	CARG of yields per crop < average CARG of yields for main agricultural crops (0.37%)*	CARG per crop > average CARG of yields for main agricultural crops (0.37%)
Crops where small/medium farms dominate (traditional and basic grains)	Cocoa: -2.36% Coffee: -1.6% Rice: -0.37%	Sugar cane: 0.40% Beans: 1.8% Maize: 0.85%
Crops where large farms dominate (NTAEs)	Yucca: -0.78%	Melon: 0.6% Oranges: 0.42% Pineapple: 4.3% African palm: 0.8%

Source: Author's calculation from SEPSA, 1990; 2008. SICA, 2009.

* Author's calculation from Berstch, 2004, 2006. Based on Appendix I.

Maize and beans, which were produced on farms which averaged 2.05ha and 1.75ha respectively, obtained much higher yields (with compound annual rates of growth of 0.85% and 1.8% respectively) than non-traditional crops such as African palm (0.8%), melon (0.6%) and oranges (0,42%), which were produced on much larger farms. FAO data (1999, 2004) show that during the period 1979-2001 the average crop yields (tonnes/ha) of cereals agriculture were much higher in Costa Rica (4,023) than in Central America (2,529) and in the rest of the world (3,096). The percentage change (from 1979-81) was also greater in Costa Rica than in

Central America and the Caribbean, and the rest of the world (see Table 10) (FAO, 2004; UNICEF, 2001).

Table 10

CEREALS PRODUCTION AND YIELDS (1979-2001)

Indicators	Costa Rica	Central America & The Caribbean	World
Average crop yield (Kg/ha)	4,023	2,529	3,096
Percentaje change from (1979-81) to 2001	61%	14%	41%

Source: FAO, 2004; UNICEF, 2001.

In sum, data presented in this section to some extent show that total production levels obtained under outward-looking development in Costa Rica were higher for diversified export-led activities, generally undertaken by large farms and TNCs. This is basically the mirror image of the trends in land uses experienced throughout Costa Rica from 1990 to 2008 (14). In terms of yields, those crops oriented to local markets and widely produced by small farmers in general experienced lower compound annual rates of growth than the average of main crops in the agriculture sector. There were some exceptions in the case of sugar cane, maize and beans. In the case of NTAEs, only pineapple obtained much larger average yields (in terms of compound annual rate of growth) than the average. Yet, the production of this crop was highly dependent on imported inputs and technologies and was dominated by TNCs and large producers in the Northern and Southern regions with limited opportunities for small holders.

3.2. Long-term strategies for small farmers: the case of the Northern Huetar region (15)

The Northern Huetar region provides a good setting to evaluate production strategies of small farmers in contemporary Costa Rica. In this region,

(14) See Botella-Rodriguez, 2014.

(15) This section is based on fieldwork developed in close collaboration with academics at the National University of Costa Rica, from May 2009 to July 2009. The author undertook more than 25 semi-structured interviews with different civil servants, researchers, academics and peasants in the Central Valley from May to July 2009. The author also selected provinces with traditional and non-traditional production systems to analyse the opportunities available for small farmers. This was the case in the Brunca Region and the Northern Huetar where both traditio-

80% of the economically active population lived in rural areas and 46.2% of the employed population was engaged in primary activities in 2000 (INEC, 2000). Whereas agriculture was the main economic activity, more than 50% of the employed population was engaged in secondary and tertiary activities. These two sectors represented alternative (in many cases supplementary) sources of employment and income for small and medium farmers in the region (Rodriguez & Avellanedo, 2005; Trejos, 2008). Although during the 1960s and 1970s national policies promoted the settlement of small-scale farmers in the region, during the 1990s and 2000s outward-looking development modified the conditions for agricultural production. Family farms adopted diversified strategies for risk prevention and when possible they tried to take advantage of new opportunities derived from RNFE and NTAEs (Faure & Samper, 2004). In 2004, 95% of producers in the region were small farmers owning less than 50% of the farming lands. In the same year, peasant settlements in Northern Costa Rica showed a 20% exit rate from settlements practising dynamic agriculture (combining subsistence and export-led activities), and a 70% exit rate for those areas undertaking subsistence farming (MAG, 2005).

Based on studies of production systems in different rural communities of the Northern Huetar region (see Girot, 1989; Ribeyre, 2004; Sandner & Nuhn, 1966; Veerabadren, 2005); analyses undertaken in 2003-2005 on the evolution of family farming in the region (Faure & Meneses, 2005, UNICRESE, 2004); and semi-structured interviews with farmers, academics and civil servants undertook during the fieldwork period in Costa Rica in May-June/2009, Table 11 illustrates the five categories of family farmers identified in the region (Faure & Samper, 2005): export-led producers, internal adaptation, alternative practices, permanence strategies and defensive farmers (16).

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nal and non-traditional crops coexist. In these two provinces the author interviewed 15 civil servants from MAG and IDA, 20 peasants at 8 IDA settlements and 20 family farmers engaged in basic grains production. In the Brunca region the author also interviewed workers at Coopeagri and researchers involved in the basic grains programme leaded by Fernando Rivera from UNA of Costa Rica.

Appendix II summarises Costa Rica's different regions and their social development index.

(16) These five strategies for small farming were also identified in the rest of regions of rural Costa Rica during the fieldwork process. Based on fieldwork and semi-structured interviews. See the list of interviews at the end of the paper.

Table 11

SMALL FARMERS' PRODUCTION STRATEGIES IN THE NORTHERN HUETAR REGION, COSTA RICA

STRATEGIES	VARIETIES	CHARACTERISTICS	Amount of farmers/farm size	Evolution of the number of farms
Export-led production	Directly engaged in NTAEs	Intensive systems highly dependent on imported agrochemicals and technology	2,000 producers/ 1-20ha	High decline
	Indirectly related with the export structure	Through contract-farming and other systems	1,500 producers/2-30ha	Moderate decline
Internal adaptation to new systems of production and management	Livestock/food crops for local markets	High production costs: approximately 1,000$/ha. Gross margin around 1,000 $/ha. Dependency on agrarian workers, imported agrochemicals and commercial bank credits	2,000 producers/ 50-300ha	High decline
	Milk production for local markets	Generally engaged in contract-farming with private companies or the national cooperative Dos Pinos.	1,500 farmers/ 10-50ha	Moderate decline
Alternative production	Diversified food crops to local and national markets		1,000 farmers/ 5-30 ha	Significant growth
Permanence: conserve old production systems	Sugarcane	Production costs rationalisation: forcing the smallest producers to sell their production rights to much larger producers	1,000 producers/ 3-100ha	Stagnation
	Dual-purpose cattle (milk and meat)	Stable incomes. In the Northern Huetar, Brunca and Central Pacific regions: alternative to dismantling basic grains production during the 1980s	3,500 producers/ 10-50ha	Moderate decline
Defensive: increasing difficulties to adapt to new production patterns	Extensive bovine cattle	Almost 50% of these producers have diversified their activities. Growing acquisitions of plots by TNCs and national enterprises: land abandonment. Regular incomes (though low)	1,500 producers/ 50-500ha	High decline
	Settlements with increasing tensions	Harvesting low value added crops, some livestock and crops (beans or tubers) for self-consumption. Annual incomes: below the minimum salary in Costa Rica (approximately 150$/per month). RNFA: e.g. eco- and agro-tourism.	4,000 producers/ 5-20ha	High decline

Source: Censo de Raíces Tropicales, MAG, 2004; CORFOGA, 2000; Faure & Meneses, 2005; Ribeyre, 2004 and UNICRESE, 2004.

Only one group formed of 3,500 producers with farms of between 1ha and 30ha were able to engage in NTAEs. Within this group, there were 2,000 producers with plots ranging from 1-20ha engaged in NTAEs and 1,500 producers indirectly engaged in NTAEs through contract-farming with plots ranging from 2-30ha. Applying intensive systems, these export-led producers were able to adapt to the new competitive conditions in international markets. However, they faced high production costs and depended on temporary labour in highly heterogeneous areas.

The rest of small farmers in the Northern Huetar region, 14,500 (see Table 11: the sum of the second, third, fourth and fifth rows) mainly produced crops for national consumption, local markets or family self-consumption. Although there were small holders who adopted diversified strategies to secure their long-term survival, others encountered problems securing sufficient production and income levels. Within this category, there was a group of producers who focused on adapting to new systems of production and management to compete in local markets (Faure & Samper, 2004; Samper, 2005). Confronting a severe crisis, 2,000 cereal farmers were engaged in beans and rice production combined with extensive beef cattle rearing in farms ranging from 50ha to 300ha. Sometimes they harvested forestry products and oranges to diversify risk in the event of adverse climatic conditions (Ribeyre, 2004) (17). The other category of internal adaptation farmers was comprised of 1,500 dairy producers who owned farms ranging from 10ha to 50ha (CORFOGA, 2000; Ribeyre, 2004). By intensifying production, they obtained approximately 10-25 litres of milk per day. However, these dairy farmers faced increasing levels of competition. This resulted in a decline of milk producers from 34,500 to 15,100 during the period 1984-2000 (CORFOGA, 2000; Villegas, 1989).

The third agriculture strategy identified in the Northern Huetar region was developed by 1,000 small alternative farmers. Seeking autonomy and

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(17) Within this group, there was a sub-group of much smaller producers (5-30ha) who rented equipment, mobilised family labour and purchased inputs depending on their financial situation. Production costs ranged from 100 to 200 US$/ha and gross margins varied between 200 US$ and 400 US$/ha (Ribeyre, 2004; UNICRESE, 2004). Many of them also worked in large farms and agroindustrial plantations while others (the poorest farmers) ended up renting or selling their plots (Faure & Samper, 2004).

The situation of basic grains producers was similar in other regions in Costa Rica such as the Brunca and Chorotega in the early 2000s.

alternative patterns of production in plots ranging from 5ha to 30ha, these producers were primarily devoted to local and national markets (MAG, 2004; Faure & Samper, 2004). Within this group, there were small and medium farms (ranging from 5ha to 30ha) with diversified production systems that combined vegetable crops and livestock, developing green fertilisers and recovering food production (Faure & Samper, 2004).

The fourth group of producers tended to conserve old production systems without questioning their fundamental organisation or livelihood strategies. There were 1,000 sugarcane producers with farms ranging from 3ha to 100ha. The majority of these farmers only produced sugarcane; almost 5% grew other export crops, and 10% developed livestock activities. Also within this group, 3,500 small and medium size dual-purpose cattle producers (10-50ha) emerged as the result of either the fragmentation of large *haciendas* or land distribution in settlements developed by IDA (Institute of Agriculture Development) in the region (Faure & Samper, 2004) (18)

The final group of small farmers defended old agricultural paradigms or simply abandoned farming activities altogether (Faure & Samper, 2004; Granados *et al.*, 2005; Pomareda, 2009). Dating from the time of colonisation, 1,500 producers developed extensive cattle rearing on farms ranging from 50ha to 500ha. Production on these farms was undertaken with limited inputs, equipment, and labour. Using defensive strategies, 4,000 small farmers lived in IDA settlements generally located in isolated areas with plots of 5-20ha. They produced low value added crops, reared some livestock and harvested some crops (beans or tubers) for self-consumption. Yet, the lack of financial resources and the small size of their plots limited their opportunities to develop a breeding system capable of competing in local markets. Therefore the majority engaged in RNFE outside of IDA settlements (with lands still partially cultivated) while other settlements were abandoned completely (19).

In sum, the study of small farmers in the Northern region illustrates the opportunities these producers found under outward-looking development

(18) Based on fieldwork and semi-structured interviews. See the list of interviews at the end of the paper.
(19) Based on fieldwork and semi-structured interviews. See the list of interviews at the end of the paper.

in Costa Rica. A lucky few gained access to NTAEs through contract farming and other types of alliances with TNCs and supermarkets because of their proximity to better infrastructure, transport and other services. But the majority of small farmers had to adapt through internal adaptation, permanence or defensive strategies. They were unable to convert to non-traditional crops due to difficulties in accessing markets, credits and inputs. They also lacked state support to produce traditional crops and basic grains and combine them with export-led productions. Agro-tourism and eco-tourism projects were also a common survival strategy combined with production for self-consumption. Most defensive, permanence and internal adaptation small farmers therefore encountered fewer opportunities to remain engaged in agricultural production. They also found few opportunities to increase total production and productivity levels to improve national food security.

4. FOOD SECURITY AND SMALL FARMING IN COSTA RICA

The final section of this paper discusses the opportunities small farmers found to improve food security in Costa Rica during the period 1990-2008. In doing so, the first subsection considers the dismantling of basic grains production and producers in Costa Rica during the 1980s and early 1990s. The second subsection then analyses the extent and evolution of Costa Rica's degree of dependence on imported food during the period 1990-2008.

4.1. The dismantling of basic grains production and producers

During the Import Substitution Industrialisation (ISI) period small-scale producers enjoyed broad-based state support and performed an important role in producing food for national consumption. This changed in the early 1980s when agricultural policies began to have adverse effects on Costa Rica's small farming systems (González Mejía, 1997; Picado & Silva, 2002; Reuben, 1989). Declining public funding, credit and other resources progressively dismantled the support available for small farmers during the 1980s and 1990s. In the early 1980s, the USAID PL-480

US Food Programme (implemented between 1982 and 1987) and its massive donations of wheat, corn and rice (totalling US$117 million) affected local white maize production and prices in Costa Rica (CENAP *et al.* 1988; USAID, 1986, 1989). Between 1990 and 1997 public and private bank support for small farmers plunged from 1.11 billion to 37.5 million of current colones (SEPSA, 1997a). In the case of basic grains, although total support for rice increased from 1.06 billion in 1990 to 1.33 billion in 1997, the support available for beans and maize decreased sharply (see Table 12) (Conroy *et al.*, 1996).

Table 12

PUBLIC AND PRIVATE BANKS SUPPORT PER SECTOR 1990-1997 (MILLIONS OF CURRENT COLONES)

Activity	1990	1997
TRADITIONAL CROPS	4,590,1	2,681.7
BASIC GRAINS	1,200	1,349.1
Rice	1,062.9	1,334.9
Beans	66.2	7.5
Maize	26.6	6.7
Sorghum	2.3	0.0
Soya	0.0	0.0
FRUITS	257.6	43.0
SMALL FARMERS	1,110.6	37.5
OTHER ACTIVITIES AND NTAES	523.5	1,178.3

Source: SEPSA, 1997b.

These measures coupled with other cuts in public spending in agriculture, the reorganisation of public agricultural institutions, and the massive reductions of basic grains tariffs opened national borders to artificially cheap and lower quality food imported from developed countries (FAO, 2006). Consequently, national staple production and producer numbers declined

significantly. In less than twenty years (from 1987 to 2005-2007) the number of basic grain producers in Costa Rica dropped from 45,000 to 7,600. This fall was the highest decrease in the Central American region (RUTA-AECID-FAO, 2007; SICA, 1981). As González Mejía (1997) notes, from 1985 to 1995 basic grains experienced a 40% decrease in total production levels. Indeed, Costa Rica experienced the lowest rate of food production in the whole of Latin America during the 1990s (CEPAL, 1994; FAO, 2004, 2007). Although nutritional and social indicators were better in Costa Rica than in the rest of Central America, the capability of small farmers to feed the national population became the weakest in the region (20). FAO (2004) country statistics show that whereas average cereal production (1,000MT) in Costa Rica experienced a -5% change from 1979-81 to 2001, in Central America and the Caribbean, and in the rest of the world, average cereal production increased 35% and 32% respectively (FAO, 2007).

In short, the new impulse for NTAEs development progressively dismantled support and incentives for basic grains production to cover national food requirements (González Mejía, 1997, 2000; Mora-Alfaro, 2005). As a result, basic grain producers were socially and economically displaced from the national food security matrix. Given most small farmers were often renters, sharecroppers or simply squatters, they ended up abandoning agriculture or selling their plots to much larger producers and TNCs engaged in non-traditional export crops (Conroy *et al.* 1996). Costa Rica progressively became a net food importer to feed the population with limited opportunities for small basic grain producers to reduce food insecurity.

4.2. Increasing food import dependency: decreasing opportunities for small food producers

During the 1990s and early 2000s Costa Rica´s agricultural policies ended up displacing basic grain producers from Costa Rica's food security ma-

(20) According to FAO data (2007) Costa Rica's prevalence of undernourishment was lower than 5% in 2005-07 compared to 15% in Central America.

trix. The dismantling of cereal production and the excessive emphasis on NTAEs promotion and agribusiness development in the agricultural sphere, transformed Costa Rica into a country that was extremely reliant on imported food to cover internal nutritional requirements. By the early 1990s, Costa Rica had become dependent on food imports to meet its food requirements (FAO, 1999, 2007, 2009). Basic grains production dropped sharply, reducing the availability of these crops for national consumption. In a little over ten years, between 1995 and 2007, the degree of reliance on imported rice increased from 30.1% to 50%; on imported beans from 16.7% to 78%; and, on imported maize from 94.6% to 97.8% (see Table 13) (SICA, 2009).

Table 13

DEGREE OF RELIANCE ON BASIC GRAINS (PERCENTAGE OF IMPORTED CEREALS FOR NATIONAL CONSUMPTION) 1995-2007

Crops	1995	2007/a
Rice	30.1%	50.0%
Beans	16.7%	78%
Maize (yellow and white)	94.6%	97.8%
Wheat	100.0%	100.0%

Source: SICA, 2009. a/ preliminary data for 2007.

These trends were reflected in the evolution of other food crops produced for national consumption. Based on FAO country statistics (2009), Table 14 shows the evolution of ratios of imported food (per group) (kilograms/person/year) in Costa Rica from 1990-92 to 2005-07. Between these two periods the ratio of imported cereals increased by 22 percentage points and the rest of the food groups showed similar trends. For example, pulses increased 69.2 percentage points; oilcrops 19.1, vegetables increased 12.0 percentage points, meat 3.2 percentage points and animal fats 2.8 percentage points (FAO, 2009). Even among those products internally (and extensively) produced in Costa Rica such as milk, meat, vegetables, fruits, sugar and vegetable oils the ratios of imported food increased substantially.

Table 14

COSTA RICA'S RATIOS OF IMPORTED FOOD (KILOGRAMS/PERSON/YEAR)* IN PERCENTAGE TERMS

Food groups	1990-92	2005-07	Difference in percentage points (2005/07-1990-92)
Cereals-Excluding Beer	65.2%	87.5%	22.3
Starchy Roots	0.26%	6.32%	6.0
Sugar & Sweeteners	1.96%	6.88%	4.9
Pulses	12.7%	81.9%	69.2
Oilcrops	62.8%	81.86%	19.1
Vegetable Oils	1.6%	9.83%	8.2
Vegetables	3.74%	15.8%	12.1
Fruits - Excluding Wine	0.7%	3.5%	2.8
Stimulants	0.78%	7.85%	7.0
Meat	0.2%	3.47%	3.2
Offals	6.25%	16.6%	10.3
Animal Fats	1.96%	4.76%	2.8
Milk - Excluding Butter	2.96	3.86%	0.9
Eggs	0.82%	2.9%	2.1
Spices	9.09%	23.07%	13.9

Source: Author's calculation from FAO country statistics, 2009.

*Estimated from total food production per group of products and total food imported per group of products.

By and large, dismantling basic grains production and support coupled with internal deregulation of food markets, transformed Costa Rica into an economy extremely dependent on imported food to cover national consumption. On the eve of the global food crisis, when the incomes from roots and yucca exports (NTAEs that amounted to US$17-28 million in 2006) and other NTAEs, like pineapple and African palm, were not sufficient to cover 50% of basic grains imported (US$90 million), Costa Rica's food dependency became abundantly clear (Pomareda, 2006). The rising trend in international food prices accelerated in 2008, doubling international wheat and maize prices in the space of two years and tripling

international rice prices in just a few months (IFPRI, 2011) (21). Such rapid increases in international food prices raised concerns about the impacts on the world's poor (World Bank, 2009) (22). This was also noted in Costa Rica where rapidly rising international food prices demonstrated the country's deep dependency on imported food. The dismantling of basic grains production and producers (during the 1990s), the lack of competitiveness of national food producers and the high degree of agricultural intensification strongly dependent on imported inputs and fuel worsened the consequences of the crisis for Costa Rica.

Within this context, the government began to rethink the national model of 'food insecurity' (PNA, 2008). Reactivating basic grains production and internal food markets, the Costa Rican government created The National Food Programme (PNA) and the Integral Food Programme (PIA) with particular focus on more vulnerable and poor families in rural areas (IDA-CNP, 2009; MAG, 2008; PNA, 2008). Providing access to resources, the National Food Programme aimed to recover national producers of basic grains and re-establish the managing role of the National Production Council (CNP). Yet, the role of basic grains producers was difficult to rediscover after more than two decades of promoting NTAEs. In 2009, the CNP was still far away from recovering its role in national cereal production. Although it is too early to know whether the measures that have been introduced since 2008 will change the nature of the Costa Rican agricultural export-led strategy, specific policies and support towards small farmers have not changed significantly under the Chinchilla administration (2010-2014). The main goals of public agricultural policies are the following: increase export-led agricultural competitiveness, promote innovation and technological development and improve the management of rural areas. Small farming and food security are just one of the strategic areas to improve the management of rural areas in Costa Rica (MAG,

(21) Wheat prices increased by 181% over the 36 months prior to February 2008, and overall global food prices increased by 83% over the same period (Mitchel, 2008; World Bank, 2009). Increased bio-fuel production has contributed to the rise in food prices.

(22) Surveys show that poor households spend at least half of their budget on food (World Bank, 2009). If rural households do not earn income from producing or selling food, then a doubling of food prices would equate to at least a 25% income loss (World Bank 2009).

2010) (23). However, the new territorial approach to rural development aims to improve rural livelihoods and enhance partnerships between public and private actors as managers of social, economic and environmental development (INDER, 2010) (24). This new idea of rural development enhanced the official transformation of the Institute for Agriculture Development (IDA) to Institute for rural development (INDER) in 2012. The new approach gives a leading role to civil society communities in rural areas where small farmers have a significant function (IDA-FAO, 2008).

5. CONCLUDING REMARKS

Costa Rica's experience of outward-looking development during the 1990s and early 2000s represents a contemporary example of the opportunities and problems that family farmers face in small developing economies in the global era. The paper has analysed the specific spaces that have been created for small farmers from the 1990s to the early 2000s considering three specific dimensions: income and employment, food production and productivity, and food security. The new agricultural census published in May 2015 might provide additional information and accurate data for future research and understanding of some of the opportunities and problems presented in this article. Some of them can be summarised as follows:

1. Employment opportunities. Costa Rica experienced a decreasing trend in the number of employed people in agriculture compared to the growing number of people engaged in RNFA from 1990 to the early 2000s. Whereas employment opportunities in agroindustries and tertiary activities significantly increased, the number of small farmers (self-employed

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(23) See for example the Strategic Plan for family farming 2011-2014 enhanced by MAG in 2012 to improve food security, incomes and livelihoods in rural areas. Within the Plan, the CNP enhances the insertion of small and medium farmers through different and more dynamic market channels such as the new Programme of Institutional Provision (PAI) (MAG, 2012).

(24) This is a more decentralised and territorial approach to manage access and use of natural resources with an increasing relevance in Latin America. Costa Rica's territorial approach to rural development became an additional pillar of the new agricultural strategy in 2008-2009. It is the framework to design rural development policies able to define actions and strategic projects for different regions and territories taking into account social actors. These strategies will be later included within the National Plan of Development. This new approach gives a leading role to civil society communities in rural areas where small farmers have significant presence (IDA-FAO, 2008).

and unremunerated workers) engaged in agriculture activities significantly declined in the early 1990s. Although there is not sufficient evidence on small farmers' engagement in NTAEs to draw precise conclusions, employment in these export-led activities seemed not to have been as significant as is generally assumed. In regions where 90% of producers were small farmers NTAEs employed less than 20% of the population engaged in agricultural activities.

2. Income opportunities. Shifting from traditional production to RNFA and NTAEs was not sufficient to tackle rural poverty, which particularly affected small and basic grain producers in Costa Rica. The paper has shown that although the incomes of NTAEs were significant, they were generally reaped by large producers and companies in sectors where small farmers were almost nonexistent. By contrast, the lack of sustainable incomes from traditional agricultural activities negatively affected an increasing number of poor small farmers and basic grain producers who lived on the border of poverty throughout Costa Rica.

3. Production and productivity levels. Changing production patterns and land use and ownership prioritised the large-scale production of non-traditional crops. As with the changes in the use of land, total production levels of NTAEs, which were generally produced by large farmers and TNCs, experienced positive compound annual rates of growth during the period under investigation. By contrast, traditional crops and basic grains, which were essential for Costa Ricans' dietary requirements and overwhelmingly produced by small farmers, showed negative compound annual rates of growth during the same period. In addition, the paper has demonstrated that compound annual rates of growth of average yields for NTAEs were not much higher than the average CARG for the main agricultural crops during the 1990s and early 2000s. In some cases (e.g. beans and maize) traditional small farmers (with low levels of funding, inputs and equipment) even achieved higher compound annual rates of growth than the average CARG of yields for the main agricultural crops. They even achieved higher yields than many non-traditional crops during the period 1990-2008.

4. Small farming strategies. The production strategies available to Costa Rican family farmers in the early 2000s seemed to be insufficient to ensure their essential role in producing food for national consumption and reduc-

ing poverty. The study of small farmers in the Northern Huetar region of Costa Rica illustrates that there were few categories of smallholders able to engage in NTAEs. Yet, the majority still harvested crops for local consumption, being completely unable to convert to non-traditional crop production. More dramatic cases, such as defensive and permanence strategies, show the extent to which RNFA, land sales or the abandonment of agriculture represented the only available alternatives for smallholders in rural areas.

5. Small farmers' opportunities to engage in food security. In terms of food security, it is frequently stressed that small countries cannot feed themselves and they need imports to counteract deficiencies in their local production systems. The contemporary general opinion is that large-scale corporate farms have a pivotal role in producing enough food for less developed countries. However, the expansion of large farms and TNCs increased food import dependency in Costa Rica during the 1990s and 2000s. This paper has illustrated that outward looking development ended up economically and socially displacing basic grain producers from national food systems, converting Costa Rica into a country that was extremely dependent on imported foods of all types. On the eve of the global food crisis, the income obtained from NTAEs was not enough to cover food imports for national consumption. External shocks such as the global food crisis (2007-2008), demonstrated the vulnerability of Costa Rica's food 'insecurity' model.

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LIST OF INTERVIEWS	POSITION/SECTOR
Aguilar Batista, O. 2009. Interview with Oscar Aguilar, Central Valley fieldwork, civil servant at IDA, San José, Costa Rica, 19 May 2009.	Civil servant at IDA, San José, Costa Rica
Cordero Cordero, J.M. 2009. Interview with Juan Manuel Cordero, civil servant at CNP, San José, Costa Rica, 17 June 2009.	Civil servant at CNP, San José, Costa Rica
Cubero, R. 2009. Interview with R. Cubero, Small producer, Asociación de Productores de El Águila, Pérez Zeledón, Brunca region 23 June 2009.	Small producer, Asociación de Productores de El Águila, Pérez Zeledón, Brunca región
Calderón, L. 2009. Planning Director, IDA, San José, Costa Rica, 2 May 2009.	Planning Director, IDA, San José, Costa Rica
Hidalgo Vargas, A.G. 2009. Interview with Ana Gissele Hidalgo, North region fieldwork, civil servant at IDA, San José, Costa Rica, 26-27 May 2009.	Civil servant at IDA, San José
González, H. Engineer and civil servant at IDA, San José, Costa Rica, 21 May 2009.	Engineer and civil servant at IDA, San José, Costa Rica
Mora-Alfaro, J. 2009. Interview with Jorge Mora, professor at FLACSO, San José, Costa Rica, 21 May 2009.	Professor at FLACSO, San José, Costa Rica
Morera, O. 2009. Interview with Olger Morera, small farmer, Asociación de productores de Veracruz, Pérez Zeledón, 23 June 2009.	Small farmer, Asociación de productores de Veracruz, Pérez Zeledón
Rivera, F. 2009. Interview with Dr. Fernando Rivera, Land and Water Faculty, UNA, Heredia, Costa Rica, 18 May 2009.	Professor at Land and Water Faculty, UNA, Heredia, Costa Rica
Rodríguez Rodríguez, J.J. 2009. Interview with José Joaquín Rodríguez, civil servant at CNP, San José, Costa Rica, 17 June 2009.	Civil servant at CNP, San José, Costa Rica
Saborío, A. 2009. Interview with MSc. Annie Saborío, Director/manager at (Gerente general) IDA, San José, Costa Rica, 2 May 2009.	Director/manager at (Gerente general) IDA, San José, Costa Rica
Villalobos Briceño, A. L. 2009. Interview with Lorena, Central Pacific region fieldwork, civil servant at IDA, Costa Rica, 2-3 June 2009.	Civil servant at IDA, Costa Rica
Vízquez Astorga, J. 2009. Interview with Judith Víquez, Caribbean region fieldwork, civil servant at IDA, San José, Costa Rica, 8-9 June 2009.	Civil servant at IDA, San José, Costa Rica

LIST OF ACRONYMS

BCCR: *Banco Central de Costa Rica/*Central Bank of Costa Rica.
CARG: Compound Annual Rate of Growth.
CEPAL/ECLAC: *Comisión Económica para América Latina y el Caribe/*(Economic Commission for Latin America and the Caribbean) .
CNP: *Consejo Nacional de Producción.*
EAP: Economic Active Population.
FDI: Foreign Direct Investment.
GATT: General Agreement on Tariffs and Trade.
IDS: *Índice de Desarrollo Social* (Costa Rica)/Social Development Index.
IFPRI: International Food Policy Research Institute.
INEC: *Instituto Nacional de Encuestas y Censos* (Costa Rica)/National Institute for Censuses and Surveys.
IDA /INDER: *Instituto de Desarrollo Agrario* (Institute for Agricultural Development). Today Institute for Rural Development.
IDS: *Indice de Desarrollo Social* (Costa Rica)/Social Development Index.
ISI: *Industrialización por Sustitución de Importaciones*/Import Substitution Industrialisation.
ITCO: *Instituto de Tierra y Colonización/* Institute for Land and Colonisation (later converted into IDA).
MAG: *Ministerio de Agricultura y Ganadería* (Costa Rica)/Ministry of Agriculture and Livestock.
MIDELPLAN: *Ministerio de planificación nacional y política económica* (Costa Rica).
NTAEs: Non-Traditional Agrarian Exports.
PIA: *Plan Integral de Alimentos* (Costa Rica)/The Integral Food Programme.
PNA: *Plan Nacional de Alimentos* (Costa Rica)/National Food Programme.
RNFE: Rural Non-Farm Employment.
RNFA: Rural Non-Farm Activities.
SEPSA: *Secretaría Ejecutiva de Planificación Sectorial Agropecuaria* (Costa Rica)/State Agency for Agricultural Planning.
SIDES: *Sistema de Indicadores de desarrollo sostenible* (Costa Rica)/ System of Indicators on Sustainable Development.
TNCs: Trans-national Corporations.
WTO: World Trade Organisation.

APPENDIX I

AVERAGE YIELDS OF MAIN AGRICULTURAL CROPS (TONNES/HA)

CROPS	1990	2008	CARG (1990-2008)
TRADITIONAL CROPS			
Banana (average size: 1,508.8)*	n.a	42.5	n.a.
Cocoa	0.2	0.13	-2.36%
Coffee (average size considering large and small farms: 20.58Ha)	7.65	5.72	-1.6%
Sugar cane (average size: 176.7Ha)	58.02	62.4	0.40%
****BASIC GRAINS (average farm size: 9,1Ha)**			
Rice (average size: 52.2Ha)	4.3	4.02	-0.37%
Beans (average size: 1.75Ha)	0.5	0.69	1,8%
Maize (white) (average size: 2.09Ha)**	1.7	1.98	0.85%
NON-TRADITIONAL CROPS			
Melon (average size: 420.5Ha)	20.46	22.8	0.6%
Oranges (average size: 1,072.46Ha)	10.3	11.12	0.42%
Pineapple (average size: 818.36 Ha)	15.8	33.56	4.3%
African palm (average size: 7,242.15Ha)	14.36	16.5	0.8%
Yucca (average 46.9Ha)	15	13.02	-0.78%
Average CARG (1990-2008) of main agricultural crops			4.06/11=0.37%

Source: Author's calculation from SEPSA, 1990; 2008. SICA, 2009. * Author's calculation from Berstch, 2004, 2006. **Baumesteir, 2010. Ruta-AECID-FAO, 2007.

These data are the only available in the same unit. Data for 1990 is in different units depending on crop. Therefore the comparison between 1990 and 2008 data in metric tonnes is not possible. It is estimated that around 18.000 TM of white maize are imported and exported (transformed into flour). ** 24% of agriculture imports in 2007.

APPENDIX II

Costa Rica is divided into five regions (Brunca, Central, Huetar Atlántica, Northern Huetar and Chorotega) comprise of 81 cantons and 469 districts (excluding Isla del Coco) each with different levels of development. The Central region (formed of San José, Alajuela, Heredia and Cartago) is the most developed area in Costa Rica. Of the 173 districts with relatively high levels of development in the country, 163 belong to the Great Metropolitan Area (GMA), which is situated in the Central region, and 10 are located nearby in the Alajuela province. The remaining districts exhibit much lower levels of development and are located in rural areas outside the Central region (MIDELPLAN, 2007). According to the Social Development Index (25) there is an inverse relationship between population density (especially high in the GMA and low in rural areas) and re-

(25) The Social Development Index (IDS) derives from a Ministry of Development and Planning (MIDELPLAN) effort to build a System of Indicators on Sustainable Development (SIDES) to capture environmental, social and political dimensions of economic development. Among SIDES social indicators, IDS summarises and measures geographical gaps between different cantons and districts on levels of development. Its high level of disaggregation can mirror the different impacts of the model per district or canton in all the regions and provinces of the country (MIDELPLAN, 2007).

lative levels of development. Areas classified as relatively more developed account for 53.9% of the population and occupy 5.4% of the national territory (MIDELPLAN, 2007). Most of them are located in the Central Valley. By contrast, relatively less well developed areas located in rural areas outside de Central Valley account for 94.6% of the total territory of Costa Rica but only 46.2% of the population (MIDELPLAN, 2007).

RESUMEN

Desarrollo mirando hacia fuera en Costa Rica: oportunidades y problemas para los pequeños productores a principios del siglo XXI

Desde principios de la década de 1990 Costa Rica basó su modelo productivo en el crecimiento de las exportaciones y los cultivos no tradicionales. Su estrategia económica general se centró en la liberalización comercial y la atracción de inversión extranjera directa (IED). En el sector agropecuario, la política quedó subordinada al modelo económico general. Los programas de reconversión productiva y desarrollo rural se apoyaron en gran medida en las exportaciones agrarias no tradicionales (EANTs) y el crecimiento del sector agroindustrial. Costa Rica fue particularmente exitoso en la diversificación de su estructura productiva (terminando con su dependencia histórica de la agricultura tradicional de exportación), la atracción de IED en los sectores secundario y terciario, así como en la creación de importantes oportunidades de empleo rural no agrícola (ERNA). Este artículo analiza en qué medida los cambios en el sector agrícola acontecidos desde principios de la década de 1990 hasta 2007-2008, que transformaron los patrones de producción, el uso y tenencia de la tierra en Costa Rica, crearon oportunidades para los pequeños productores. En este sentido, el artículo presenta algunas de dichas oportunidades creadas para este grupo de productores a principios del siglo XXI.

PALABRAS CLAVE: Costa Rica, 'desarrollo mirando hacia fuera', EANTs, pequeños productores, reconversión productiva, RNFE.

CÓDIGOS JEL: N56, O13, Q15, Q18.

ABSTRACT

Outward-looking development in Costa Rica: opportunities and problems for small farmers in the early 2000s

In the early 1990s Costa Rica's production model shifted to export-led growth and non-traditional agrarian exports (NTAEs) promotion. The overall economic strategy was based on trade liberalisation and foreign direct investment (FDI) attraction. In the agriculture sector, policies became subordinated to the overall economic model; productive conversion programmes and rural development strongly supported NTAEs and agroindustrial growth. Costa Rica was particularly successful at diversifying the export structure (reducing the country's long-standing dependency on traditional export agriculture), attracting FDI in secondary and tertiary activities and creating significant opportunities in RNFA. This paper discusses to what extent new production patterns, land use and ownership created opportunities for small farmers. The paper also presents specific opportunities and problems created for this group of producers.

KEYWORDS: Costa Rica, outward-looking development, NTAEs, small farmers, agricultural conversion, RNFE.

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