



NON-FARM BUSINESSES LOCAL ECONOMIC INTEGRATION LEVEL: THE CASE OF SIX PORTUGUESE SMALL AND MEDIUM-SIZED MARKET TOWNS* A SECTORAL APPROACH**

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ABSTRACT:

Small and medium-sized towns in rural areas are of particular interest at this stage in the evolution of the European CAP.

With this paper we wish to analyze the results provided by around 150 questionnaires addressed to non-farm businesses in each of the three small and three medium-sized Portuguese towns chosen to be studied in order to draw some conclusions about the purchase and sale local economic integration of these firms regarding: - the relative importance of some of the firms' characteristics; - the question whether the size of the town matters; - the economic sector where the firm developed its activity; and, finally, - the role of the main economic activity of the town in terms of employment and proximity to a metropolitan area.

Keywords: Rural Development; Local Integration; Small and Medium - Sized towns

RESUMO:

As pequenas e médias cidades das áreas rurais são particularmente relevantes nesta fase da evolução da PAC europeia.

No presente artigo, pretende-se analisar os resultados dos cerca de 150 questionários realizados junto de empresas não-agrícolas, localizadas em cada uma das três pequenas e das três médias cidades portuguesas escolhidas para fazerem parte do referido estudo, de modo a permitir tirar conclusões quanto à integração das vendas e das compras na economia local em termos: - da relativa importância de algumas das características destas empresas; - da questão da relevância, ou não, da dimensão da cidade; - do sector económico no qual a firma desenvolve a sua actividade; e, por último, - do papel da principal actividade económica da cidade em termos do emprego e da sua proximidade com uma área metropolitana.

Palavras-chave: Desenvolvimento Rural; Integração Local; Pequenas e Médias Cidades

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1. INTRODUCTION

The major challenge currently facing rural Europe is to find and promote appropriate forms of economic development to maintain and improve the social and economic vitality of rural areas as they adjust to the changing demands placed upon them by Society and by the market economy. The proposed project focuses on the role that small and medium-sized towns play in rural development. It seeks to measure the economic linkages between such towns and the surrounding countryside in order to assess their present and potential role as growth poles in rural development. Since the proposed project will pay particular (but not exclusive) attention to the linkages with farm businesses and households, it will also help measure the likely impact of changes in agricultural policy on other sectors of the rural economy.

The project will yield two types of output. It will provide a firm basis for sound advice to policy-makers at regional, national and EU level who are seeking to foster sustainable rural development. It will also improve the methodologies through which the impact of changing agricultural and rural development policy may be modelled in *ex-ante* and *ex-post* policy evaluations.

The proposed project has the following objectives:

- (i) to measure the flows of goods, services and labour between firms and households in a purposively-selected sample of small and medium-sized rural towns and their surrounding countryside in order to establish the extent and nature of local economic integration;
- (ii) to compare the degree of local economic integration of different types and size of town, firm and household found in the selected areas;
- (iii) to draw conclusions and make recommendations for those at local, national and EU level seeking to stimulate more diversified economic activities and employment opportunities in rural areas;
- (iv) to provide an accessible source of spatially referenced microeconomic data to those seeking to model the future impact of EU policies on the rural economy.

According to the methodology of the Markettowns' project, six small and medium sized Portuguese towns were chosen as a study area:

Selected Towns	Small (5,000 – 20,000 Pop.)	Medium (20,000 – 40,000 Pop.)
Area where employment in Agriculture is well above national average (Portugal: 10.8%)	1- MIRANDELA (41.1%)	2- VILA REAL (20.1%)
Area where employment in Tourism is well above national average (Portugal: 6.5%)	3- TAVIRA (21.9%)	4- SILVES (28.6%)
"Accessible" per-urban area within daily commuting distance of metropolitan center	5- LIXA	6- ESPOSENDE

2. SURVEY PROCEDURES

The sample frame reproduces the population structure for the *concelho*'s territorial unit.

The non-farm business sample frame took into account the distribution of the non-farm businesses according to the Economic Activity Classification (NACE codes) and was divided into businesses based either on urban or rural *freguesias*, as indicated on the following table:

In each town contacts were made with important local institutions (Town Halls, Managerial Associations, Commercial and Industrial Associations, Regional Agriculture Boards and Regional Tourism Boards). Such contacts supplied the team with information regarding potential interviews in the form of lists of businesses and farm businesses and were extremely useful to make the research project known and to impart information as to the actual limits of the town. It was possible, then, to adequately define zones A

and B. In each town *Press releases* were addressed both local newspapers and radio stations. This proved to be particularly useful as concerns non-farm businesses for it made contacts between team members and businessmen a lot easier.

The methodology used in the surveying process was the direct approach, that is, the face-to-face interviews. In Mirandela, Vila Real, and Lixa, the team members travelled to and fro every day, starting at 8.00 a.m. and returning between 7.00 and 8.00 pm. Eventually, in order to maximize information collecting team members were allotted different tasks having to drive two cars. In the three towns, two in Algarve and in Esposende, due to their being far away from Vila Real, the team had to stay there for some time.

Surveying to businesses implied going to each one separately, sometimes by appointment through telephone call but mostly on a door-to-door approach. Each interview lasted an average of 20 minutes, depending on the business dimension,

TABLE 1
Sampling frames used – NON-FARM BUSINESS

Questionnaires to be done NACE cods	1 Mirandela		2 Vila Real		3 Tavira		4 Silves		5 Lixa		6 Esposende	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
A + B	15	4	8	3	17	8	19	10	3	2	13	7
C	-	-	0	0	0	0	0	0	-	-	1	1
D	10	3	6	2	5	3	6	4	28	14	15	7
E	-	-	0	0	0	0	0	0	-	-	-	-
F	10	3	15	4	19	10	17	7	11	6	15	7
G	40	12	38	12	34	15	35	16	38	17	34	17
H	11	3	12	3	13	7	13	7	8	4	9	5
I	2	1	3	1	1	1	1	1	2	1	1	1
J	2	2	5	1	1	1	1	1	3	1	3	1
K	6	1	8	3	6	3	5	2	4	3	5	2
L a Q	4	1	5	1	4	2	3	2	3	2	4	2
Total	100	30	100	30	100	50	100	50	100	50	100	50

Source: Done by the author according to 1) Northern Region Statistic Yearbook 2000, INE (2001); (2) Statistic Yearbook of the Algarve Region 2000, INE (2001).

but especially on the owners' willingness to give access to their bookkeeping. In some business firms those responsible saw no problem in providing us with information concerning their balance sheets. In business firms where bookkeeping is done by an independent accountancy firm the results of the interviews tended to slow down the surveying process.

The methodology used was the face-to-face questionnaire in an average of ten questionnaires a day per researcher. From the beginning of the survey process it was stipulated that questionnaires not fully filled in would not be usable; therefore, we ended up with no incomplete or unusable questionnaires. The adopted methodology resulted in fully complete questionnaires.

The choice of criteria to define the sampling frame took into account the possibility of an immediate identification and classification of the units to survey. This helped make the survey process a lot easier, and avoid unnecessary deviations from the

previously defined samples. It also helped guarantee its representativeness. Some discrepancies observed between some of the sample frames and the number of questionnaires actually done was caused by difficulties in approaching the firms and the owners' unwillingness or lack of time to answer the questionnaires. The random survey process constant monitoring was also rendered more difficult due to there being several members of the team on the field at the same time.

3. FINDINGS

First of all, as regards respondents' answers, in every town of our study area non-farm businesses may be described as follows, according to the value of their most frequent features:

- The firm businesses belong to the service sector;
- They are independent firms with no sites;

TABLE 2
Usable questionnaires done – NON-FARM BUSINESS

Questionnaires done	1 Mirandela		2 Vila Real		3 Tavira		4 Silves		5 Lixa		6 Esposende	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
A + B	0	1	4	2	16	8	19	2	1	2	2	7
C	-	-	-	-	-	-	-	-	-	-	1	0
D	13	5	9	2	6	4	7	4	21	15	13	12
E	-	-	1	0	-	-	-	-	-	-	-	-
F	5	2	9	4	12	6	11	7	6	5	15	5
G	52	15	43	14	36	17	34	20	51	18	43	17
H	15	3	13	4	13	11	16	10	8	4	9	5
I	3	1	1	1	2	1	1	3	3	-	1	1
J	3	2	4	2	2	-	1	1	4	1	5	2
K	6	0	9	1	10	2	9	1	3	3	7	1
L a Q	4	1	7	1	3	-	3	2	3	2	4	1
Total	101	30	101	30	100	50	101	50	100	50	100	51

Source: Done by the author

- They have always been located there, half of which for over ten years;
- Business firms with more than ten WTE have the bigger employment;
- The data were supplied by the owner.

Local Integrations Indicator (LII) is a simple descriptive measure which indicates the proportion of a particular activity (input purchases, output sales etc) of a particular group of economic entities (all businesses, large businesses, manufacturing businesses etc) allocated to the local economy. For example, the **businesses** (_b) located within town X may derive 25% of their **inputs** (by value) (_i) from other businesses within the locality, a further 50% from elsewhere in the country, 5% from elsewhere in E U and 20% from countries outside the E U. In this case, the LII _{bi} of this town is 0.25 (where the subscript “_{bi}” shows that the indicator is referring to purchases of inputs by businesses within the town). They may sell only 10% of their outputs (_o) to businesses in the locality, in which case the LII _{bo} of the town is 0.1. Businesses in the town may derive only 40% of their employment (measured in full time equivalents) from households of the locality. In this case, the LII _{be} of the town will be 0.4. Taken together, and measured for a particular town, these indicators give an immediate measure of the extent to which it is integrated into its immediate locality rather than into national, European or global economy.

3.1 ECONOMIC FOOTPRINTS AND LOCAL INTEGRATION INDICATORS

In terms of non-farm business sales, the integration in the local economy is weak in Silves and Lixa and very weak in Tavira. On the contrary, it is moderate in Esposende and strong in Mirandela and Vila Real.

The non-farm business purchase local integration is weak in every town but Tavira, where it is very weak and in Esposende where it shows values pointing to a moderate integration.

The **employment** measured in terms of WTE and the correspondent salary payments have a high local integration level.

The **non-farm businesses employment** shows a high local integration with LII values oscillating between 0.9 and 1.

Unlike the economic footprint analysis, actual transaction values are not incorporated into the variables in this case. Analysis is based directly on the proportion of the sales and purchases in each zone. If a more realistic relative comparison between firms of a different size and ownership status is to be achieved one has to take into account that, for example, smaller firms are by their very nature more likely to deal with smaller transaction values, which means that incorporating such values in the analysis may not give a realistic picture of the spatial pattern of these transactions in comparison to larger firms.

Independent variables are derived from those already incorporated into the descriptive analysis, related for instances to firm size, firm type, organization type, firm location, years in the address, origin of the manager. The bi-variate analysis can be set up to compare one type to another, e.g.: independent firms with no sites vs. national and international companies; firms located in urban areas vs. firms located in rural areas.

TABLE 3

Economic footprints of downstream and upstream activities for non-farm businesses in the study areas

Zone	Boundary	1 Mirandela		2 Vila Real		3 Tavira		4 Silves		5 Lixa		6 Esposende	
		Sales %	Purchases %	Sales %	Purchases %	Sales %	Purchases %	Sales %	Purchases %	Sales %	Purchases %	Sales %	Purchases %
A	In the town	29.5	13	46.3	29.2	6.5	4.5	11.4	9.5	3.6	17.6	41.4	44.4
B	Up to 4 miles/7km from the town	20.8	5.9	14.1	2.3	1.7	0.2	8.9	8.7	12.8	6.3	1.4	0.9
C	4-10 miles/7-16 km from the town	11.9	3.4	10.2	8.7	4.7	2.7	13.5	17.8	4.1	1.7	12.8	11.6
D	Elsewhere in the county NUTS III level	10.2	2.3	6.8	2.2	0.8	34.2	8.1	3.2	2.2	1.9	1.3	1.1
E	Elsewhere in the region NUTS II level	14.7	26.9	17.4	25.9	1.9	1.7	6.4	2.4	46.9	44	32.8	34.6
F	Elsewhere in the country	11	16	1.5	21.6	19.1	8.9	38.1	49.9	2.4	18.9	9.7	6.8
G	European Union	1.3	32.5	3.7	7.6	65.3	47.8	12.8	8.5	24.8	8.7	0.6	0.6
H	Elsewhere international	0.6	0	0	2.6	0	0	0.9	0	3.2	0.9	0	0
	All	100	100	100	100	100	100	100	100	100	100	100	100

Integration Indicators													
A + B	Local Integration Indicator (LII _{bo} ¹ and LII _{bi} ²)	0.5	0.19	0.6	0.32	0.082	0.047	0.2	0.18	0.16	0.24	0.43	0.45
A + B + C	Extended Local Integration Indicator (ELII _{bo} and ELII _{bi})	0.62	0.22	0.71	0.4	0.13	0.074	0.34	0.36	0.21	0.26	0.56	0.57

Source: Own calculations.

TABLE 4

Employment footprints for non-farm businesses in the study areas

Zone	Boundary	1 Mirandela		2 Vila Real		3 Tavira		4 Silves		5 Lixa		6 Esposende	
		FTEs %	Salary payments %	FTEs %	Salary payments %	FTEs %	Salary payments %	FTEs %	Salary payments %	FTEs %	Salary payments %	FTEs %	Salary payments %
A	In the town	70.7	73.6	57.8	58.6	53.4	53.4	54.9	56.3	27.6	27.4	37.8	38.6
B	Up to 4 miles/7km from the town	25.4	22.3	38.8	37.7	36.7	33.8	35.3	31.7	46.2	46.9	40.8	36.6
C	4-10 miles/7-16 km from the town	2.6	2.4	1.8	1.7	4.7	5.8	7.7	9.1	21.8	20.7	15.8	16.7
D	Elsewhere in the county NUTS III level	0.6	0.9	0.6	0.6	2.2	3.1	0.2	0.3	1.1	1.3	3.3	4.7
E	Elsewhere in the region NUTS II level	0.4	0.4	0.8	1.1	1.1	1.3	0.6	0.5	3.2	3.5	1.6	2.5
F	Elsewhere in the country	0.1	0.4	0.4	0.4	0.7	1.4	0.9	1.2	0.1	0.3	0.5	0.8
G	European Union	0	0	0	0	0.9	0.8	0.1	0.2	0	0	0.2	0.2
H	Elsewhere international	0	0	0	0	0.4	0.3	0.2	0.8	0	0	0	0
	All	100	100	100	100	100	100	100	100	100	100	100	100
A + B	Local Integration Indicator (LII _{be} ³ and LII _{bs} ⁴)	0.96	0.96	0.97	0.96	0.9	0.87	0.9	0.88	0.74	0.74	0.79	0.75
A + B + C	Extended Local Integration Indicator (ELII _{be} and ELII _{bs})	0.99	0.98	0.98	0.98	0.95	0.93	0.98	0.97	0.96	0.95	0.94	0.92

Source: Own calculations.

¹ bo = business outputs.

² bi = business inputs.

³ be = business employment.

⁴ bs = business Salary payments.

The analysis involves comparing means of the respective dependent variables for the various independent comparisons of interest. This has to be done in two stages:

- First, compute mean and standard deviation for each comparison. In SPSS (*Analyze/Means/Compare Means*);
- Whilst independent comparisons of means are usually done through un-paired, t-tests, it is likely that the dependent variables will not confirm the assumptions of a normal distribution and equality of variances (This is based on previous experiences with data of this kind. It will be preferable to use the un-paired t-test if the data will allow), in which case the use of the Man Whitney U test for 2 independent samples and the Kruskal-Wallis, for more than two samples will provide more robust results. This is the non-parametric equivalent of the un-paired t-test and involves the substitution of ranks for the actual values. In SPSS select (*Analyze/Non-parametric tests/ 2 or more than two independent samples*). The results will be presented on table 5.

We will begin by analysing the **non-farm business sales** integration level:

- The non-farm business size influences its forward integration level in all the study towns;
- The type of business regarding activity sectors influences the sales integration level in every town but Vila Real;
- The type of organization has no influence in towns like Vila Real, Lixa, and Esposende; the same happens as to the location of firms in Lixa, and Esposende and the respondent's/manager's origin in Vila Real, Mirandela and Esposende; and

- As to the variable number of years at this address it only influences non-farm business sales integration level in Esposende.

We shall now look into the **non-farm business purchase** integration level:

- The firm size according to the number of WTE workers does not influence in any way the purchase local integration level in this type of firm except in Esposende, when the *concelho* is considered an analysis territorial unit. The same applies to the variable type of firm according to activity sectors in the cases of Mirandela, Vila Real, and Esposende. This variable influences the purchase local integration of this kind of firm in Tavira, Silves, and Lixa;
- The type of organization influences firms purchase integration level in every town but Tavira and Esposende. The location of firm only influences the purchase integration pattern in Vila Real. A similar situation occurs with the manager's origin in Lixa;
- Finally, the number of years at the address does not influence in anyway the purchase local integration level.

4. SECTORAL ANALYSIS

This chapter presents a sectoral analysis regarding the various activities according to each of the studied towns. For each town a table concerning local and broad integration is presented in what concerns sales and purchases. The tables also contain an indication about the relative weight each activity carries in the sector in terms of the total number of business firms and of the total volume of sales and purchases.

TABLE 5

Summary table of results for non-farm businesses in the study areas

Characteristic (Sales)	Towns					
	1 Mirandela	2 Vila Real	3 Tavira	4 Silves	5 Lixa	6 Esposende
Firm Size						
Zona A+B	20.816 ***	10.697 **	14.43 ***	30.931 ***	22.63 ***	26.91 ***
Zona A+B+C	26.554 ***	9.762 **	9.908 **	14.187 ***	32.819 ***	29.728 ***
Firm Type						
Zona A+B	13.903 ***	3.2	18.162 ***	28.806 ***	20.38 ***	29.384 ***
Zona A+B+C	24.822 ***	0.897	17.877 ***	11.439 ***	33.38 ***	25.277 ***
Type of organisation						
Zona A+B	622.5 *	760.5	689 *	632 *	936.5	1059
Zona A+B+C	556 **	677.5	755.5	543.5 **	1081.5	1105
Location of firm (Zone A or B)						
Zona A+B	1426	1062 ***	1980 **	2042 *	2237.5	2405.5
Zona A+B+C	994 ***	1214 *	1992 **	2358	2352.5	2237.5
Years at this address						
Zona A+B	2.61	5.46	1.735	0.016	2.791	11.758 ***
Zona A+B+C	0.499	3.582	1.762	2.209	2.555	10.48 **
Origin/how local is the manager						
Zona A+B	2.165	7.567	6.582 *	16.46 ***	4.898	2.008
Zona A+B+C	2.093	5.753	7.721 *	20.994 ***	8.744 **	2.533
Characteristic (Purchases)						
Firm Size						
Zona A+B	4.229		1.205	0.298	2.182	9.204 **
Zona A+B+C	3.659		4.421	2.874	4.351	2.327
Firm Type						
Zona A+B	2.109		9.472 ***	7.021 **	6.315 **	4.232
Zona A+B+C	2.906		22.279 ***	3.572	7.66 **	0.581
Type of organisation						
Zona A+B	496 ***		892 *	318.5 ***	556 ***	916.5
Zona A+B+C	457 ***		935 *	330 ***	716.5 ***	914.5
Location (Zone A or B)						
Zona A+B	1376		2419.5	2293	2342.5	2306.5
Zona A+B+C	1248.5		2243 *	1339	2378.5	2412.5
Years at this address						
Zona A+B	0.242		1.457	0.806	4.178	4.935
Zona A+B+C	0.209		2.622	1.494	5.533	1.226
Origin/how local is the manager						
Zona A+B	0.837		1.357	5.27	6.264 *	0.348
Zona A+B+C	0.542		2.547	4.421	7.224 *	1.942

Significance level: * 90% (P<0.1) ** 95% P<0.05) *** 99% (P<0.01).

Source: Own calculations.

4.1 MIRANDELA

When we consider the total number of **non-agricultural business firms**, the situation concerning the **purchase** level in view of the LII is 0.19 and of the ELII is 0.22. In what concerns the activity sector, Agriculture, Manufacturing Industry, Wholesale Commerce and Personal Services behave similarly to the whole of the business firms (very weak). The remaining sectors presented higher values.

The situation regarding the level of **sales** in view of the LII is 0.50 and of the ELII is 0.62. In what concerns the activity sector, only the Construction sector recorded a similar behaviour to the whole of the business firms (moderate and strong). Wholesale Commerce and Manufacturing Industry presented lower values. Agriculture, Retail Commerce, Hotels and Restaurants, Transport Financial Activities, Public Administration and Personal Services (strong and very strong), on the contrary, registered higher values.

In terms of the **bi-variate analysis**, the variable influencing **purchases** for the **whole of the business firms** is the Organization Type, regarding both Zone (A+B) and Zone (A+B+C). When one considers the **Retail Commerce** sector separately, one concludes that the variables influencing both Zones' integration are the Business Firm Size, the Organization Type and the Business Firm Location.

The variables influencing **sales** for the **whole of the business firms** are the Business Firm Size, Organization Type and Business Firm Location, regarding both Zone (A+B) and Zone (A+B+C). The Business Firm Location variable also influences sales when only Zone (A+B+C) is taken into consideration. When one considers the **Retail Commerce** sector separately, one concludes that no other variables influence local integration. (see tables 6 and 7).

4.2 VILA REAL

When the **total number of non-agricultural business firms** is considered, the situation concerning **purchase** level in view of the LII is 0.32 and of the ELII is 0.40. In what concerns the activity sector, Agriculture, Public Administration and Personal Services with a weak LII, and Manufacturing Industry with a moderate ELII, behave similarly to the whole of the business firms. Energy, Wholesale Commerce and Retail Commerce (very weak) reached lower values. Construction, Hotels and Restaurants, Transport and Communications and Banking and Finance (strong and very strong), on the contrary, registered higher values.

The situation regarding the **sales** level in view of the LII is 0.60 and of the ELII is 0.71. In what concerns the activity sector, Retail Commerce and Banking and Finance with a strong LII, and Hotels and Restaurants and Public Administration with a strong ELII, show a kind of behaviour similar to the whole of the business firms. Energy, Manufacturing Industry and Transport and Communications (very weak and weak) present lower values. Construction, Wholesale Commerce and Personal Services (very strong), on the contrary, register higher values.

In terms of the **bi-variate analysis**, the variables influencing **purchases** for the **whole of the business firms** are the Organization Type and Business Firm Location, regarding both Zone (A+B) and Zone (A+B+C). When one considers the **Retail Commerce** sector separately, one concludes that the variable influencing the integration of both Zones is the Business Firm Location.



TABLE 6
Purchases Local Integration Indicators – Mirandela

Activities (% purchases)	Fishing or forestry (0,2%)		Energy or water (0,0%)		Manufacturing (23,8%)		Construction (16,9%)		Wholesale and distribution (24,5%)		Retail (25,4%)		Hotels and restaurants (5,7%)		Transport and communications (0,2%)		Banking, finance, insurance, etc. (1,7%)		Public administration, education, health (1,4%)		Personal services (0,3%)		
	N	%	firms																				
N / % firms	1	0,8	0	0,0	17	13,0	8	6,1	4	3,1	57	43,5	20	15,3	4	3,1	11	8,4	5	3,8	4	3,1	
Integration level	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	
Very Weak																							
Weak																							
Moderate																							
Strong																							
Very Strong																							

Very Weak: [0-0,25[Weak: [0,25-0,4[Moderate: [0,4-0,6[Strong: [0,6-0,8[Very Strong: [0,8-1] **Source:** Own calculations.

TABLE 7
Sales Local Integration Indicators – Mirandela

Activities (% sales)	Fishing or forestry (0,1%)		Energy or water (0,0%)		Manufacturing (26,4%)		Construction (13,3%)		Wholesale and distribution (20,3%)		Retail (24,5%)		Hotels and restaurants (5,7%)		Transport and communications (0,6%)		Banking, finance, insurance, etc. (6,0%)		Public administration, education, health (2,6%)		Personal services (0,4%)		
	N	%	firms																				
N / % firms	1	0,8	0	0,0	17	13,0	8	6,1	4	3,1	57	43,5	20	15,3	4	3,1	11	8,4	5	3,8	4	3,1	
Integration level	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	
Very Weak																							
Weak																							
Moderate																							
Strong																							
Very Strong																							

Very Weak: [0-0,25[Weak: [0,25-0,4[Moderate: [0,4-0,6[Strong: [0,6-0,8[Very Strong: [0,8-1] **Source:** Own calculations.

The variables influencing **sales** for the whole of the business firms are the Business Firm Size and Business Firm Location, regarding both Zone (A+B) and Zone (A+B+C). The Respondent's Origin variable also influences sales when only Zone (A+B+C) is taken into consideration. When one considers the **Retail Commerce** sector separately, one concludes that the variables influencing both Zones integration are the Business Firm Location and the Business Firm Size. When one considers the Retail Commerce sector separately, one concludes that the variables influencing the integration of both Zones are the Business Firm Location and the Business Firm Size. The Organization Type variable also influences sales when only Zone (A+B+C) is taken into consideration (see tables 8 and 9).

4.3 TAVIRA

When the **total number of non-agricultural business firms** is considered, the situation concerning **purchase** level in view of the LII is 0.047 and of the ELII is 0.074. In what concerns the activity sector, Construction, Retail Commerce and Transport and Communications show a behaviour similar to the whole of the business firms (very weak). The remaining sectors, however, recorded higher values.

The situation regarding the level of **sales** in view of the LII is 0.082 and of the ELII is 0.13. In what concerns the activity sector, Construction, Wholesale Commerce, Hotels and Restaurants and Transport and Communications show a behaviour similar to the whole of the business firms (very weak). As for the rest of the sectors, these registered higher values.

In terms of the **bi-variate analysis**, the variable influencing **purchases** for the **whole of the business firms** is the Business Firm Type, regarding both Zone (A+B) and Zone (A+B+C). When one considers the

Retail Commerce sector separately, one concludes that the variable influencing the integration of Zones (A+B+C) is the Business Firm Location.

The variables influencing **sales** for the whole of the business firms are the Business Firm Size, Organization Type, Business Firm Location and Respondent's Origin, regarding both Zone (A+B) and Zone (A+B+C). The Business Firm Location variable also influences sales when only Zone (A+B) is taken into consideration. When one considers the **Retail Commerce** sector separately, one concludes that no other variable influences local integration (see tables 10 and 11).

4.4 SILVES

When the **total number of non-agricultural business firms** is considered, the situation concerning **purchase** level in view of the LII is 0.18 and of the ELII is 0.36. In what concerns the activity sector, Manufacturing Industry, Retail Commerce and Personal Services show a behaviour similar to the whole of the business firms in view of the LII (very weak). Separately, no sector has a weak ELII. The remaining sectors reached higher values.

The situation regarding the level of **sales** in view of the LII is 0.20 and of the ELII is 0.34. In what concerns the activity sector, Manufacturing Industry and Banking and Finance show a behaviour similar to the whole of the business firms (very weak and weak). Construction, Hotels and Restaurants and Transport and Communications presented lower values in view of the ELII. As for the rest of the sectors, these registered higher values.

In terms of the **bi-variate analysis**, the variable influencing **purchases** for the whole of the business firms is the Organization Type, regarding both Zone

TABLE 8
Purchases Local Integration Indicators – Vila Real

Activities (% purchases)	Fishing or forestry (6,0%)		Energy or water (3,6%)		Manufacturing (24,3%)		Construction (17,8%)		Wholesale and distribution (7,6%)		Retail (27,6%)		Hotels and restaurants (5,8%)		Transport and communications (1,1%)		Banking, finance, insurance, etc. (1,6%)		Public administration, education, health (3,9%)		Personal services (0,7%)	
	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
N / % firms	6 / 4,6		1 / 0,8		12 / 9,2		13 / 9,9		3 / 2,3		48 / 36,6		17 / 13,0		2 / 1,5		15 / 11,5		6 / 4,6		8 / 6,1	
Integration level	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
Very Weak																						
Weak																						
Moderate																						
Strong																						
Very Strong																						

Very Weak: [0-0,25] Weak: [0,25-0,4] Moderate: [0,4-0,6] Strong: [0,6-0,8] Very Strong: [0,8-1] Source: Own calculations.

TABLE 9
Sales Local Integration Indicators – Vila Real

Activities (% sales)	Fishing or forestry (5,3%)		Energy or water (5,3%)		Manufacturing (24,7%)		Construction (20,0%)		Wholesale and distribution (5,5%)		Retail (20,3%)		Hotels and restaurants (7,0%)		Transport and communications (1,1%)		Banking, finance, insurance, etc. (3,5%)		Public administration, education, health (6,3%)		Personal services (0,9%)	
	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
N / % firms	6 / 4,6		1 / 0,8		12 / 9,2		13 / 9,9		3 / 2,3		48 / 36,6		17 / 13,0		2 / 1,5		15 / 11,5		6 / 4,6		8 / 6,1	
Integration level	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
Very Weak																						
Weak																						
Moderate																						
Strong																						
Very Strong																						

Very Weak: [0-0,25] Weak: [0,25-0,4] Moderate: [0,4-0,6] Strong: [0,6-0,8] Very Strong: [0,8-1] Source: Own calculations.

TABLE 10
Purchases Local Integration Indicators – Tavira

Activities (% purchases)	Fishing or forestry (0,2%)		Energy or water (0,0%)		Manufacturing (0,3%)		Construction (93,2%)		Wholesale and distribution (0,1%)		Retail (2,7%)		Hotels and restaurants (2,1%)		Transport and communications (1,2%)		Banking, finance, insurance, etc. (0,2%)		Public administration, education, health (0,0%)		Personal services (0,0%)	
	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
N / % firms	22 / 14,7		0 / 0,0		9 / 6,0		18 / 12,0		1 / 0,7		54 / 36,0		24 / 16,0		3 / 2,0		14 / 9,3		2 / 1,3		3 / 2,0	
Integration level	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
Very Weak																						
Weak																						
Moderate																						
Strong																						
Very Strong																						

Very Weak: [0-0,25] Weak: [0,25-0,4] Moderate: [0,4-0,6] Strong: [0,6-0,8] Very Strong: [0,8-1] Source: Own calculations.

TABLE 11
Sales Local Integration Indicators – Tavira

Activities (% sales)	Fishing or forestry (0,5%)		Energy or water (0,0%)		Manufacturing (0,5%)		Construction (91,7%)		Wholesale and distribution (0,1%)		Retail (2,5%)		Hotels and restaurants (3,2%)		Transport and communications (0,9%)		Banking, finance, insurance, etc. (0,6%)		Public administration, education, health (0,0%)		Personal services (0,0%)	
	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
N / % firms	22 / 14,7		0 / 0,0		9 / 6,0		18 / 12,0		1 / 0,7		54 / 36,0		24 / 16,0		3 / 2,0		14 / 9,3		2 / 1,3		3 / 2,0	
Integration level	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
Very Weak																						
Weak																						
Moderate																						
Strong																						
Very Strong																						

Very Weak: [0-0,25] Weak: [0,25-0,4] Moderate: [0,4-0,6] Strong: [0,6-0,8] Very Strong: [0,8-1] Source: Own calculations.

(A+B) and Zone (A+B+C). When one considers Zone (A+B) separately, the Business Firm Type variable still influences purchases. When one considers the **Retail Commerce** sector separately, one concludes that the variables influencing the integration of Zones (A+B+C) are the Organization Type and the Number of Years at the Residence.

The variables influencing **sales** for the whole of the business firms are the Business Firm Size, Organization Type, Business Firm Size and Respondent's Origin, regarding both Zone (A+B) and Zone (A+B+C). The Business Firm Location variable also influences sales when only Zone (A+B) is taken into consideration. When one considers the **Retail Commerce** sector separately, only the Respondent's Origin variable seems to influence local integration for both Zones. The Business Firm variable also influences sales when only Zone (A+B+C) is considered. (see tables 12 and 13).

4.5 LIXA

When the **total number of non-agricultural business firms** is considered, the situation concerning **purchase** level in view of the LII is 0.24 and of the ELII is 0.26. In what concerns the activity sector, Transport and Communications, Banking and Finance and Public Administration show a behaviour similar to the whole of the business firms in view of the ELII (weak). Agriculture, Manufacturing Industry, Wholesale Commerce and Retail Commerce show a behaviour similar to the whole of the business firms in view of the LII (very weak). The remaining sectors recorded higher values.

The situation regarding the level of **sales** in view of the LII is 0.16 and of the ELII is 0.21. In what concerns the activity sector, Manufacturing Industry and Transport and Communications behave similarly to the whole of the business firms (very weak). As for the rest of the sectors, these registered higher values.

In terms of the **bi-variate analysis**, the variables influencing **purchases** for the whole of the business firms are the Business Firm Type, the Organization Type and Respondent's Origin, regarding both Zone (A+B) and Zone (A+B+C). When one considers Zone (A+B) separately, the Business Firm Type variable still influences purchases. When one considers the **Retail Commerce** sector separately, one concludes that no other variable influences local integration.

The variables influencing **sales** for the whole of the business firms are the Business Firm Size and the Business Firm Type, regarding both Zone (A+B) and Zone (A+B+C). The Respondent's Origin variable also influences sales when only Zone (A+B+C) is considered. When one considers the **Retail Commerce** sector separately, the variables Respondent's Origin and the Number of Years at the Residence seem to influence local integration for both Zones. The Business Firm variable also influences sales when only Zone (A+B+C) is taken into consideration. (see tables 14 and 15).

4.6 ESPOSENDE

When the **total number of non-agricultural business firms** is considered, the situation concerning **purchase** level in view of the LII is 0.45 and of the ELII is 0.57. In what concerns the activity sector, only the Construction sector shows a behaviour similar to the whole of the business firms (moderate). Fishing, Wholesale Commerce, Retail Commerce, Transport and Communications and Personal Services (very weak) presented lower values. Public Administration and Banking and finance (strong and very strong), on the contrary, reached higher values.

The situation regarding the level of **sales** in view of the LII is 0.43 and of the ELII is 0.46. In what concerns the activity sector, Construction and Public Administration behave similarly to the whole of the business firms

TABLE 12

Purchases Local Integration Indicators – Silves

Activities (% purchases)	Fishing or forestry (0,6%)		Energy or water (0,0%)		Manufacturing (16,8%)		Construction (23,4%)		Wholesale and distribution (11,3%)		Retail (32,0%)		Hotels and restaurants (5,1%)		Transport and communications (9,3%)		Banking, finance, insurance, etc. (0,7%)		Public administration, education, health (0,3%)		Personal services (0,6%)	
	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
N / % firms	21 / 13,9		0 / 0,0		11 / 7,3		18 / 11,9		3 / 2,0		48 / 31,8		25 / 16,6		4 / 2,6		11 / 7,3		5 / 3,3		5 / 3,3	
Integration level	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
Very Weak																						
Weak																						
Moderate																						
Strong																						
Very Strong																						

Very Weak: [0-0,25] Weak: [0,25-0,4] Moderate: [0,4-0,6] Strong: [0,6-0,8] Very Strong: [0,8-1] Source: Own calculations.

TABLE 13

Sales Local Integration Indicators – Silves

Activities (% sales)	Fishing or forestry (0,8%)		Energy or water (0,0%)		Manufacturing (21,0%)		Construction (27,1%)		Wholesale and distribution (8,4%)		Retail (19,1%)		Hotels and restaurants (11,0%)		Transport and communications (7,2%)		Banking, finance, insurance, etc. (4,3%)		Public administration, education, health (0,6%)		Personal services (0,6%)	
	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
N / % firms	21 / 13,9		0 / 0,0		11 / 7,3		18 / 11,9		3 / 2,0		48 / 31,8		25 / 16,6		4 / 2,6		11 / 7,3		5 / 3,3		5 / 3,3	
Integration level	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
Very Weak																						
Weak																						
Moderate																						
Strong																						
Very Strong																						

Very Weak: [0-0,25] Weak: [0,25-0,4] Moderate: [0,4-0,6] Strong: [0,6-0,8] Very Strong: [0,8-1] Source: Own calculations.

TABLE 14

Purchases Local Integration Indicators – Lixa

Activities (% purchases)	Fishing or forestry (1,6%)		Energy or water (0,0%)		Manufacturing (22,8%)		Construction (2,4%)		Wholesale and distribution (9,8%)		Retail (5,1%)		Hotels and restaurants (0,5%)		Transport and communications (56,3%)		Banking, finance, insurance, etc. (1,2%)		Public administration, education, health (0,2%)		Personal services (0,2%)	
	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
N / % firms	2 / 1,3		0 / 0,0		37 / 24,7		10 / 6,7		14 / 9,3		54 / 36,0		12 / 8,0		4 / 2,7		11 / 7,3		3 / 2,0		3 / 2,0	
Integration level	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
Very Weak																						
Weak																						
Moderate																						
Strong																						
Very Strong																						

Very Weak: [0-0,25] Weak: [0,25-0,4] Moderate: [0,4-0,6] Strong: [0,6-0,8] Very Strong: [0,8-1] Source: Own calculations.

TABLE 15

Sales Local Integration Indicators – Lixa

Activities (% sales)	Fishing or forestry (1,4%)		Energy or water (0,0%)		Manufacturing (33,1%)		Construction (2,6%)		Wholesale and distribution (10,8%)		Retail (5,8%)		Hotels and restaurants (0,5%)		Transport and communications (43,9%)		Banking, finance, insurance, etc. (1,5%)		Public administration, education, health (0,4%)		Personal services (0,1%)	
	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
N / % firms	2 / 1,3		0 / 0,0		37 / 24,7		10 / 6,7		14 / 9,3		54 / 36,0		12 / 8,0		4 / 2,7		11 / 7,3		3 / 2,0		3 / 2,0	
Integration level	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
Very Weak																						
Weak																						
Moderate																						
Strong																						
Very Strong																						

Very Weak: [0-0,25] Weak: [0,25-0,4] Moderate: [0,4-0,6] Strong: [0,6-0,8] Very Strong: [0,8-1] Source: Own calculations.

(moderate). Fishing, Wholesale Commerce, Retail Commerce, Transport and Communications and Personal Services registered lower values (very weak). The Banking and Finance sector registered higher values (very strong).

In terms of the **bi-variate analysis**, the variable influencing **purchases** for the whole of the business firms is the Business Firm Size, regarding only Zone (A+B). When one considers the **Retail Commerce** sector separately, one concludes that only the Business Firm Location influences local integration but only for Zone (A+B).

The variables influencing **sales** for the whole of the business firms are the Business Firm Size, the Business Firm Type and Number of Years at the Residence, regarding both Zone (A+B) and Zone (A+B+C). When one considers the **Retail Commerce** sector separately, only the Business Firm Location variable seems to influence local integration but only when Zone (A+B+C) is taken into consideration. (see tables 16 and 17).

5. CONCLUSIONS

Non-farm businesses are small, independent businesses with no other sites, run by the owner. They usually belong to the service sector and have been located on that particular place for quite some time.

Table 18 shows these agents' integration level in local economies, when considered as a whole. There are four levels of integration for non-farm businesses: sales, purchases, employment, and paid salaries.

The **non-farm business sales** integration level is weak in the two towns where tourism is the dominating economic activity and in the periurban town of Lixa. The size of periurban towns increases the sale

integration level. In Esposende its integration level is moderate whilst in the two towns where agriculture prevails the non-farm business sale integration level is strong.

As to **non-farm business purchases**, in a way they are poorly integrated in local economies. In fact, in Tavira, a small - sized town where tourism is the main economic activity the integration level is very weak. In Esposende, a medium periurban town, the non-farm business purchase local integration level is moderate.

The local integration is stronger forwards than backwards.

The **sectoral analysis** in each town shows the local integration level of the different economic activities for every study area. Another aspect that should be emphasized is the weight each sector carries on the total volume of purchases and sales. The share of the total purchases and sales is mostly a decisive factor as far as the local integration behaviour of all the business firms in a certain town is concerned. We may refer as an example the cases of construction business firms in Tavira and Esposende and transports and communications in Lixa.

The sustainability of likely rural development policies should not ignore the specificity of each town and each economic activity sector. The dichotomy and antagonism between country and city must be replaced by a new and real cooperation leading to partnerships among equals. It is high time politicians with responsibility at the decision level stopped looking at the rural world from a perspective of dependency and inferiority, as it often happened in the last century. If it is not possible to adapt homogeneous measures to different development speeds both in economic and, especially, human terms at a national level, very hardly would it be so within the European Union.

TABLE 16

Purchases Local Integration Indicators – Esposende

Activities (% purchases)	Fishing or forestry (0,1%)		Energy or water (0,0%)		Manufacturing (4,5%)		Construction (92,8%)		Wholesale and distribution (0,7%)		Retail (1,2%)		Hotels and restaurants (0,3%)		Transport and communications (0,2%)		Banking, finance, insurance, etc. (0,1%)		Public administration, education, health (0,1%)		Personal services (0,0%)	
	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
N / % firms	8 / 5,3		0 / 0,0		26 / 17,2		19 / 12,6		3 / 2,0		52 / 34,4		14 / 9,3		3 / 2,0		15 / 9,9		5 / 3,3		6 / 4,0	
Integration level	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
Very Weak																						
Weak																						
Moderate																						
Strong																						
Very Strong																						

Very Weak: [0-0,25] Weak: [0,25-0,4] Moderate: [0,4-0,6] Strong: [0,6-0,8] Very Strong: [0,8-1] Source: Own calculations.

TABLE 17

Sales Local Integration Indicators – Esposende

Activities (% sales)	Fishing or forestry (0,0%)		Energy or water (0,0%)		Manufacturing (5,0%)		Construction (90,3%)		Wholesale and distribution (0,7%)		Retail (1,2%)		Hotels and restaurants (0,5%)		Transport and communications (0,4%)		Banking, finance, insurance, etc. (1,8%)		Public administration, education, health (0,0%)		Personal services (0,1%)	
	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
N / % firms	8 / 5,3		0 / 0,0		26 / 17,2		19 / 12,6		3 / 2,0		52 / 34,4		14 / 9,3		3 / 2,0		15 / 9,9		5 / 3,3		6 / 4,0	
Integration level	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII	LII	ELII
Very Weak																						
Weak																						
Moderate																						
Strong																						
Very Strong																						

Very Weak: [0-0,25] Weak: [0,25-0,4] Moderate: [0,4-0,6] Strong: [0,6-0,8] Very Strong: [0,8-1] Source: Own calculations.

TABLE 18

Study Area Economic Agents Integration Synthesis

	Non-farm businesses			
	Sales	Purchases	FTEs	Salary payments
1 Mirandela				
Zone A+B	M	W	VS	VS
Zone A+B+C	S	W	VS	VS
2 Vila Real				
Zone A+B	S	W	VS	VS
Zone A+B+C	S	W	VS	VS
3 Tavira				
Zone A+B	VW	VW	VS	VS
Zone A+B+C	VW	VW	VS	VS
4 Silves				
Zone A+B	W	W	VS	VS
Zone A+B+C	W	W	VS	VS
5 Lixa				
Zone A+B	W	W	S	S
Zone A+B+C	W	W	VS	VS
6 Esposende				
Zone A+B	M	M	S	S
Zone A+B+C	M	M	VS	VS

Very Weak: [0-0,25] Weak: [0,25-0,4] Moderate: [0,4-0,6] Strong: [0,6-0,8] Very Strong: [0,8-1]

Source: From Tables 3 and 4.

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