



International Conference on Urban Risks Conferência Internacional de Riscos Urbanos

Urban societal risks: integration of social disadvantaged residents

Emília Malcata REBELO¹

¹ University of Porto, Territorial, Urban and Environmental Planning Division, CITTA – Research Centre for Territory, Transports and Environment, Portugal, emalcata@fe.up.pt

Abstract: The strong real-estate pressure in city centres gradually triggers sharp price rises and, consequently, engenders social risks for less-favoured disadvantaged residents. These result, on the one hand, from the strong deterioration of buildings and dwellings where they live and, on the other, from their economic and social vulnerabilities that question their permanence in the places where they have always lived (where they feel socially and culturally included).

In these communication are reported the goals, methodologies, results and conclusions of a technical, socioeconomic and financial study undertaken for the Porto municipality (Portugal). It tackles the social risks faced by Porto "islands" inhabitants. The "islands" consist in ranks of little houses built from the beginning of the 19th century on, aimed at lodging the working class that increasingly looked for urban areas in this city. Despite the analysis was pursued for all the "islands" in Porto city (Portugal), the case study herein presented centres in S. Víctor "islands", located in the Urban Rehabilitation Area of Bonfim, just by the side of the historical centre classified as worldwide heritage by UNESCO.

The study begins by the analysis of the risks involved in these "islands", concerning, namely, buildings' and dwellings' physical deterioration, accessibility shortcomings, isolation and safety shortage. This characterization resulted from local visits, population surveys and interviews. Then a rehabilitation intervention by public authorities is proposed, which consists in the rehabilitation of the current dwellings, doubling their liveable areas, and remodelling them so to increase their residents' comfort levels. Finally this rehabilitation proposal is supported on cost and profit assessment that justify its feasibility, resorting to available financial instruments. This proves its economic and financial sustainability, and stresses its contribution to social risk reduction (namely social exclusion and economic, social and cultural collapse of its inhabitants).

Keywords: Social risks; urban rehabilitation tools; rehabilitation costs and rents; social cohesion; urban sustainability.

1. Introduction

Currently in Porto town exist 957 "islands", considering as such the housing nuclei including four or more dwellings with independent entry that share the same door number. These "islands" (mainly privately owned) hold a total of 8265 lodgings (a percentage of 56,9% of them being occupied), where inhabit around 4900 households, corresponding to approximately 10400 people) (Breda-Vásquez and Conceição, 2015). Most of these "islands" locate in Porto's historical centre or in its neighbourhoods, and belong to urban rehabilitation areas (ARU). An ARU consist in a territorial surface characterized by shortcomings, obsolescence or degradation in buildings, infrastructure, public spaces and collective equipment's uses, solidity, safety, aesthetics or health, that justifies an urban rehabilitation detail plan. Specific financial instruments that support urban rehabilitation are applicable to these areas (www.portaldahabitacao.pt).

The economic and financial feasibility study herein presented shows that, within the Portuguese and Porto currently enforced urban rehabilitation and planning legislation, the application of the financial tool "Rehabilitation to rent – affordable housing"¹ - recently passed - turns possible the rehabilitation of these "islands" in a social-oriented way (Portuguese legislation). This rehabilitation intervention should be

¹ This financial tool is called "Reabilitar para Arrendar – Habitação Acessível" in Portuguese language.



mastered by municipal authorities, namely in what concerns the provision of management services, and the facilitation of trade-offs among the involved stakeholders. These authorities can further resort to structural and investment European Funds if social inclusion and regeneration of disadvantaged territories is in question. Besides assuring the required social cohesion and all citizens' equal treatment, this rehabilitation intervention is also sustainable from an economic and financial standpoint, what is more and more relevant within the current financial-crisis framework (Afonso, 2009; IHRU, 2015a).

The methodology is pursued through the following steps: (a) collection of local quantitative data (concerning the number of "islands", number of buildings and dwellings in each one, respective average surfaces, keeping condition, as well as the number of resident families), and population surveys (in order to grasp what they feel in relation to the place where they live, how they deal with neighbours, their social inclusion, main problems they face, willingness to remain in the same housing); (b) proposal of a physical intervention in dwelling rehabilitation providing resident families with a warranted surface between 50 and 60 square meters ², and assuring as far as possible that most families remain in the "islands" where they currently live; (c) assessment of the intervention costs, according to dwellings' keeping condition; (d) assessment of the financial burden to be supported by dwelling owners according to the financial tool recently enforced and aimed at the rehabilitation of private dwellings "Reabilitar para Arrendar" (IHRU, 2015b); (e) anticipation of the rents according to the enforced legislation, (f) resort to structural and investment European funds to support part of the rehabilitation cots, and (g) comparison between cost burdens and incomes, keeping in the "island" the deprived families that traditionally have lived there.

2. Case study

Bonfim urban rehabilitation area started its town planning process in the middle of the 19th century. Their uses were traditionally diversified (housing, industry, trade and services), but it embodied conditions that have especially favoured the housing function. It includes many public parks and wooden streets, and some important heritage reference buildings, such as its Municipal Library and the Fine Arts Faculty. This area historically experienced a progressive abandonment by its population (with the subsequent ageing of its resident population), and is currently characterized by a concentration of "islands"³ in S. Víctor quarter (www.portaldahabitacao.pt), that holds 22 "islands" in all. All of them reveal problems both at housing nuclei and dwelling grounds. The former refer to building degradation, lack of internal accessibility, and troubles accruing from respective vacancy and abandonment. The later, by their turn, may refer to dwelling degradation, over occupation or equipment shortages, to location and neighbourhood troubles, or even to isolation. These problems aggravate whenever two or more problems overlap.

The dimension of the "islands" dwellings and its average occupation rate justifies an intervention that increases their gross building surfaces, which subsequently impacts on housing quality and comfort for its current and future residents.

So the most important goal of the current proposal consisted in the provision of reconstructed dwellings with 50 m2 to 60 m2, keeping the previous total gross built area of the "island". Together with this goal, and after the estimation of the number of resident households in each housing nucleus, it was also considered – for social cohesion reasons, and according to residents' wishes, expressed in the pursued surveys – that it would be important to assure the stay in the "island" of most of its current resident households (Conceição and Breda-Vásquez, 2015).

As far as the S. Víctor "islands" are concerned, the main outcomes of this work point out the proposal to reconvert the initial 244 dwellings – currently inhabited by 154 families - into 153 new dwellings⁴. These circumstances require the ultimate rehousing of 3 families (Table 1).

² The average surface of an "island" dwelling is currently around 35 square meters.

³ This information was collected through local direct observation of housing nuclei, complemented with a socioeconomic survey directed to respective population (Breda-Vásquez and Conceição, 2015).

⁴ The morphological typology was the one adopted by the Porto Municipality in 2001 population census. So, and specifically for the case of S. Víctor quarter, 1.1. represents "pattern islands" ("islands" that develop in depth, perpendicularly to the road network, and the internal entries are in straight lines), 1.2. depicts "islands with variable



International Conference on Urban Risks Conferência Internacional de Riscos Urbanos

Operational interventio													roposal						
	Address	Number Parish		Morphological typology	Morphological typology Number of dwellings		Total dweeling gross surface	Number of dwellings with a total gross surface of 60 m ²	Percentage of occupied dwellings	Nunber of occupied dwellings	Proposed number of dwellings	Proposed new dwellings' surface	Number of new dwellings - number of occupied dwellings						
PRAC	ALEGRIA	76	BONFIM	1.1	12	34,1	408,8	6,8	58,3	7	7	58,4	0						
PRAC	ALEGRIA	85	BONFIM	1.2	8	35,9	287,0	4,8	52,1	5	5	57,4	0						
RUA	BARAO S COSME	35	BONFIM	2.3	11	43,5	479,0	8,0	53,5	6	8	59,9	2						
RUA	DUQUE DE SALDANHA	188	BONFIM	1.1	7	34,1	238,5	4,0	58,3	5	4	59,6	-1						
RUA	DUQUE DE SALDANHA	212	BONFIM	1.1	5	34,1	170,4	2,8	58,3	3	3	56,8	0						
RUA	GOMES FREIRE	9 e 1	BONFIM	2.5	27	37,6	1014,2	16,9	67,2	19	19	53,4	0						
RUA	GOMES FREIRE	94	BONFIM	1.1	6	34,1	204,4	3,4	58,3	4	4	51,1	0						
RUA	GOMES FREIRE	65	BONFIM	1.1	16	34,1	545,1	9,1	58,3	10	10	54,5	0						
RUA	S VITOR	184	BONFIM	1.2	8	35,9	287,0	4,8	52,1	5	5	57,4	0						
RUA	S VITOR	113	BONFIM	1.1	5	34,1	170,4	2,8	58,3	3	3	56,8	0						
RUA	S VITOR	172	BONFIM	1.1	12	34,1	408,8	6,8	58,3	7	7	58,4	0						
RUA	S VITOR	116	BONFIM	1.1	17	34,1	579,2	9,7	58,3	10	10	57,9	0						
RUA	S VITOR	48	BONFIM	1.1	7	34,1	238,5	4,0	58,3	5	4	59,6	-1						
RUA	S VITOR	62	BONFIM	1.1	11	34,1	374,8	6,2	58,3	7	7	53,5	0						
RUA	S VITOR	68A	BONFIM	1.1	17	34,1	579,2	9,7	58,3	10	10	57,9	0						
RUA	S VITOR	76	BONFIM	1.1	19	34,1	647,3	10,8	58,3	12	12	53,9	0						
RUA	S VITOR	99A	BONFIM	1.1	9	34,1	306,6	5,1	58,3	6	6	51,1	0						
RUA	S VITOR	49	BONFIM	1.1	9	34,1	306,6	5,1	58,3	6	6	51,1	0						
RUA	S VITOR	80	BONFIM	1.1	4	34,1	136,3	2,3	58,3	3	2	68,1	-1						
RUA	S VITOR	104	BONFIM	1.1	22	34,1	749,6	12,5	58,3	13	13	57,7	0						
TRAV	S VITOR	22	BONFIM	1.1	6	34,1	204,4	3,4	58,3	4	4	51,1	0						
RUA	S VITOR	62 Tr.	BONFIM	2.3	6	43,5	261,3	4,4	53,5	4	4	65,3	0						
					244					154	153								

Table 1 – Proposal for the physical intervention in the "islands" of S. Víctor quarter

The rehabilitation costs were estimated according to the rehabilitation experience of the works execution nuclei of Porto Vivo – Urban Rehabilitation Society - according to their Urban Development Fund proposal for buildings in good, reasonable or bad maintenance keeping. Within this scope, costs of $100 \notin m^2$, $300 \notin m^2$, and $700 \notin m^2$ were taken for light, medium or deep rehabilitation works, respectively.

Considering that the proposal of physical intervention will express through an increase in dwellings' gross surfaces – what implies more complex building operations and so higher costs – it was assumed that the percentage weight of lodgings in bad maintenance's costs should be higher than the weight of the costs of lodgings in reasonable maintenance. So the attribution of the costs in each nucleus is computed in relation to its total surface in the following proportion: to half of the surfaces of the dwellings in reasonable maintenance are attributed light costs, to double of the surfaces of the dwellings in medium maintenance are imputed average costs, and to the surfaces of the dwellings in ruin are assigned high costs.

The computations performed point out an average rehabilitation cost of 15.632 euros per dwelling, and a total rehabilitation cost for all the "islands" located in this urban rehabilitation area of 2 403 195 euros (Table 2).

development" (the internal accesses in these islands are in straight lines, and the underlying plot may or may not develop in depth perpendicularly to the road network); 2.3. stands for shared houses (the whole lodgings add up to one or more bigger, generally two-stored houses, that have been divided); and 2.5. represents situations where different sections coexist, where at least one of them falls within the concept "island" or "atypical island" (Breda-Vásquez and Conceição, 2015).



Table 2 – Systematization of the operation costs per dwelling and per "island" for the "islands"	located
in S. Víctor quarter for the physical intervention in the "islands" of S. Víctor quarter	

Address				typology	ellings	ice according to typology	Opera intervo prop	tional ention osal	Nur dwe reas repair, or	nber o Ilings sonabl bad ro in ruir	of in le epair 1	Divisi	on of inter	rvention c	osts	Gross ne acco main	surface w dwelli ording to tenance	of the ings o the state	Rehabilitation cost				
		Numbe	Numbe		Number of dw	Dwelling average surfa morphological 1	Proposed number of dwellings	Proposed new dwellings' surface	Reasonable repair	Bad repair	Ruin	Total gross surface of the new proposed dwellings	Percentage of dwellings in reasonable repair	Percentage of dwellings in bad repair	Percentage of dwellings in ruin	Reasonable repair	Bad repair	Ruin	Cost per rehabilitated dwelling	Total cost of the intervention			
PRAC	ALEGRIA	76	BONFIM	1.1	12	34,1	7	58,4	5	6	1	408,8	16,1%	77,4%	6,5%	66	317	26	17.145	120.017			
PRAC	ALEGRIA	85	BONFIM	1.2	8	35,9	5	57,4	3	5	0	287,0	13,0%	87,0%	0,0%	37	250	0	15.724	78.621			
RUA	BARAO S COSME	35	BONFIM	2.3	11	43,5	8	59,9	0	11	0	479,0	0,0%	100,0%	0,0%	0	479	0	17.961	143.691			
RUA	DUQUE DE SALDANHA	188	BONFIM	1.1	7	34,1	4	59,6	7	0	0	238,5	100,0%	0,0%	0,0%	238	0	0	5.962	23.849			
RUA	DUQUE DE SALDANHA	212	BONFIM	1.1	5	34,1	3	56,8	5	0	0	170,4	100,0%	0,0%	0,0%	170	0	0	5.678	17.035			
RUA	GOMES FREIRE	9 e 1	BONFIM	2.5	27	37,6	19	53,4	20	6	1	1014,2	43,5%	52,2%	4,3%	441	529	44	12.300	233.705			
RUA	GOMES FREIRE	94	BONFIM	1.1	6	34,1	4	51,1	3	1	2	204,4	27,3%	36,4%	36,4%	56	74	74	19.978	79.911			
RUA	GOMES FREIRE	65	BONFIM	1.1	16	34,1	10	54,5	1	2	13	545,1	5,1 2,9% 22,9% 74,3% 16 125		405	32.241	322.406						
RUA	S VITOR	184	BONFIM	1.2	8	35,9	5	57,4	0	7	1	287,0	0,0%	93,3%	6,7%	0	268	19	18.753	93.763			
RUA	S VITOR	113	BONFIM	1.1	5	34,1	3	56,8	1	0	0	170,4	100,0%	0,0%	0,0%	170	0	0	5.678	17.035			
RUA	S VITOR	172	BONFIM	1.1	12	34,1	7	58,4	3	7	2	408,8	8,8 8,6% 80,0% 11,4% 35 327 47		47	19.191	134.336						
RUA	S VITOR	116	BONFIM	1.1	17	34,1	10	57,9	3	12	2	579,2	5,5%	87,3%	7,3%	32	505	42	18.429	184.291			
RUA	S VITOR	48	BONFIM	1.1	7	34,1	4	59,6	3	4	0	238,5	15,8%	84,2%	0,0%	38	201	0	16.004	64.017			
RUA	S VITOR	62	BONFIM	1.1	11	34,1	7	53,5	2	9	0	374,8	5,3%	94,7%	0,0%	20	355	0	15.498	108.488			
RUA	S VITOR	68A	BONFIM	1.1	17	34,1	10	57,9	14	3	0	579,2	53,8%	46,2%	0,0%	312	267	0	11.138	111.385			
RUA	S VITOR	76	BONFIM	1.1	19	34,1	12	53,9	17	1	0	647,3	81,0%	19,0%	0,0%	524	123	0	7.450	89.395			
RUA	S VITOR	99A	BONFIM	1.1	9	34,1	6	51,1	3	6	0	306,6	11,1%	88,9%	0,0%	34	273	0	14.196	85.177			
RUA	S VITOR	49	BONFIM	1.1	9	34,1	6	51,1	6	3	0	306,6	33,3%	66,7%	0,0%	102	204	0	11.925	71.548			
RUA	S VITOR	80	BONFIM	1.1	4	34,1	2	68,1	1	2	1	136,3	9,1%	72,7%	18,2%	12	99	25	24.159	48.318			
RUA	S VITOR	104	BONFIM	1.1	22	34,1	13	57,7	2	19	1	749,6	2,5%	95,0%	2,5%	19	712	19	17.586	228.614			
TRAV	S VITOR	22	BONFIM	1.1	6	34,1	4	51,1	4	2	0	204,4	33,3%	66,7%	0,0%	68	136	0	11.925	47.699			
RUA	S VITOR	62 Tr.	BONFIM	2.3	6	43,5	4	4 65,3 1 3 2 261,3 5,9% 70,6% 23,5% 15 184								61	24.973	99.892					
AVERAG	GE AND TOTAL REHAB	ILITATIO	N COST (per so	cenari	o)													15.632	2.403.195			

It was then computed the value of the loan resulting from the operational intervention proposed for each "island" – considering the intervention costs previously computed – using the financial tool already referred to. Rehousing costs⁵ add to these burdens, considering they amount to about 200 euros per family, supposing the city council have enough social housing units at its disposal. It was further considered a possible curtailment of about 10% of the intervention costs in the linkage to infrastructure networks (electricity, water, sanitation and gas), architecture projects and municipal fees' exemption. The global costs for owner result from the algebraic sum of these three parcels: loan, rehousing costs, and cost reduction casually provided by the city council.

The net present value of these global costs to be supported by dwellings' public or private owners was computed considering a present rate of 4,5% per annum⁶, and the payment of the interest liabilities at the end of each year, with the redemption of the whole loaned capital (90%) at the end of the 15th year, paying the 10% of own capital at the beginning of the intervention.

The same present rate was used in the computation of the net present value of rents, considering the rent flows take place at the end of each year during the loan period (fifteen years). The average provisional rent per dwelling – according to the urban rent law, the real estate municipal tax code, and the statements of the financial tool "Reabilitar para arrendar" – amounts to about 236 euros, what means an average value of 1 622 euros per "island" and a total amount of 35 685 euros resulting from the whole rehabilitation intervention (Table 3).

⁵ Rehousing costs refer to provisional costs during the rehabilitation works or to permanent costs for the few cases where it doesn't seem possible to keep some families in their "island".

⁶ This rate matches the average capital cost rate provided by financial institutions.



Table 3 – Systematization of the burdens and rents and of respective net present values per dwelling and per "island" in S. Víctor quarter

ent value ew rents	Net present value of the intervention	153.536	127.574	91.124	542.505	109.349	218.698	256.207	91.124	218.698	309.823	127.574	200.473	309.823	346.272	164.024	153.536	291.598	164.024	72.899	400.947	109.349	139.749	209.041
Net prese of the ne	Net present value per dwelling	30.707	31.893	30.375	28.553	27.337	31.243	32.026	30.375	31.243	30.982	31.893	28.639	30.982	28.856	27.337	30.707	29.160	27.337	36.450	30.842	27.337	34.937	30.419
	"bnslzi" 194 tn91 w9N	1.191	990	707	4.210	848	1.697	1.988	707	1.697	2.404	990	1.556	2.404	2.687	1.273	1.191	2.263	1.273	566	3.111	848	1.084	1.622
uation	New rent per dwelling	238	247	236	222	212	242	249	236	242	240	247	222	240	224	212	238	226	212	283	239	212	271	236
New sit	New rent per m ²	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	
	Tributary patrimonial value per m ²	747,1	747,1	747,1	747,1	747,1	747,1	747,1	747,1	747,1	747,1	747,1	747,1	747,1	747,1	747,1	747,1	747,1	747,1	747,1	747,1	747,1	747,1	
ilings - number of	iilləwb wən to tədmuN əwb bəiquɔɔo	0	-1	0	0	0	0	2	0	0	0	-1	0	0	0	0	0	0	0	-1	0	0	0	Ļ
nt value´s cost	Fite cost of the Totation	70.886	18.776	13.297	177.992	60.362	90.855	108.300	13.297	101.527	139.362	48.715	82.262	85.021	69.031	64.686	59.600	242.305	54.529	36.614	172.998	36.352	75.254	.822.023
Net preser global	Cost per rehabilitated Bnillewb	14.177	4.644	4.432	9.368	15.090	12.979	13.587	4.432	14.504	13.936	12.129	11.752	8.502	5.753	10.781	11.920	24.231	9.088	18.207	13.308	9.088	18.814	11.851 1
luction in ges to rructure orks and ipal fee nption	Total cost of the intervention	-9.376	-2.385	-1.704	-23.371	-7.991	-12.002	-14.369	-1.704	-13.434	-18.429	-6.402	-10.849	-11.138	-8.939	-8.518	-7.862	-32.241	-7.155	-4.832	-22.861	-4.770	-9.989	-240.319
Cost red linka infrast netwo munic exen	Cost per rehabilitated gnillawb	-1.875	-596	-568	-1.230	-1.998	-1.715	-1.796	-568	-1.919	-1.843	-1.600	-1.550	-1.114	-745	-1.420	-1.572	-3.224	-1.192	-2.416	-1.759	-1.192	-2.497	-1.563
stsoo guisuodag				600	3.800	800	1.400	1.200	600	1.400	2.000	1.000	1.400	2.000	2.400	1.200	1.000	2.000	1.200	600	2.600	800	800	30.800
sgnilləwb bəiquɔɔo fo rədnuN			5	3	19	4	7	6	ю	7	10	5	7	10	12	9	5	10	9	3	13	4	4	154
Rehabilitation burder for the private owner	Total burden of the noitnevretni	79.263	20.161	14.401	197.563	67.553	101.456	121.469	14.401	113.561	155.791	54.117	91.711	94.159	75.570	72.004	66.462	272.546	60.483	40.846	193.259	40.322	84.444	2.031.542
	Burden per rehabilitated gnillawb	15.853	5.040	4.800	10.398	16.888	14.494	15.184	4.800	16.223	15.579	13.529	13.102	9.416	6.298	12.001	13.292	27.255	10.081	20.423	14.866	10.081	21.111	13.214
ation cost	Total cost of the intervention	93.763	23.849	17.035	233.705	79.911	120.017	143.691	17.035	134.336	184.291	64.017	108.488	111.385	89.395	85.177	78.621	322.406	71.548	48.318	228.614	47.699	99.892	2.403.195
Rehabilit	Cost per rehabilitated gnillawb	18.753	5.962	5.678	12.300	19.978	17.145	17.961	5.678	19.191	18.429	16.004	15.498	11.138	7.450	14.196	15.724	32.241	11.925	24.159	17.586	11.925	24.973	15.632
tional ention osal	Proposed new dwellings` surface	57,4	59,6	56,8	53,4	51,1	58,4	59,9	56,8	58,4	57,9	59,6	53,5	57,9	53,9	51,1	57,4	54,5	51,1	68,1	57,7	51,1	65,3	
Opera interve prop	Proposed number of Brogosed number of	5	4	3	19	4	7	8	e	7	10	4	7	10	12	9	5	10	9	2	13	4	4	
ypology ypology	atus əgerəve gnilləwD Tisələ tənərələr Tisələrələr	35,9	34,1	34,1	37,6	34,1	34,1	43,5	34,1	34,1	34,1	34,1	34,1	34,1	34,1	34,1	35,9	34,1	34,1	34,1	34,1	34,1	43,5	
sgnillə	Wumber of dw	8	7	5	27	9	12	11	5	12	17	7	11	17	19	6	8	16	6	4	22	9	9	COME
Morphological typology			1.1	1.1	2.5	1.1	1.1	2.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.1	1.1	1.1	1.1	1.1	2.3	ND IN
Asine9				BONFIM	BONFIM	BONFIM	BONFIM	BONFIM	BONFIM	BONFIM	BONFIM	BONFIM	BONFIM	BONFIM	BONFIM	BONFIM	BONFIM	BONFIM	BONFIM	BONFIM	BONFIM	BONFIM	BONFIM	N COST A
	184	188	212	9 e 1	94	76	35	113	172	116	48	62	68A	76	99A	85	65	49	80	104	22	62 Tr.	ENTIO	
Address			DUQUE DE SALDANHA	DUQUE DE SALDANHA	GOMES FREIRE	GOMES FREIRE	ALEGRIA	BARAO S COSME	S VITOR	ALEGRIA	GOMES FREIRE	S VITOR	AND AVERAGE INTERV											
	RUA	RUA	RUA	RUA	RUA	PRAC	RUA	RUA	RUA	RUA	RUA	RUA	RUA	RUA	RUA	PRAC	RUA	RUA	RUA	RUA	TRAV	RUA	TOTAL	

However, there are many other important issues that deserve further reflection. On the one hand, the tabulated net present values of rents represent respective upper limits, but if the current inhabitants are



kept, these are strongly constrained by legal bounds and by their incomes. On the other hand, the owner's costs may also be aggravated, namely by fiscal and insurance burdens that, in practice, may reach values correspondent to about five monthly rents. The net present value of the new conditioned rents amounts to 30 117 euros per dwelling and amounts to about 209 thousand euros per "island". This scenario assumes that the available dwellings will have housing uses, but should they be used for trade or services, the income value will increase substantially, namely in what concerns the new unoccupied dwellings that become available from the rehabilitation intervention.

There are additional financial incentives associated to the Portuguese planning of Structural and Investment European Funds (FEEI) between 2014 and 2020, and to their thematic and regional components - namely the Reginal Operational Program North 2014-2020 - the municipality should resort to, namely the ones directly applicable to urban rehabilitation areas, many of them covering non-reimbursable expenses⁷. The balanced management of these different financial instruments should render the whole operation sustainable both from economic/financial and social standpoints.

3. Conclusions

This study stresses how urban rehabilitation interventions can strongly encourage and support an honourable social cohesion and integration – namely on housing quality and comfort grounds – in order to shoulder social needs, resorting to appropriate already existent financial systems at European, national or regional/local levels.

It clearly shows that the sketch of proper financial instruments turns rehabilitation interventions sustainable from an economic and financial perspective, thus strengthening their social impact. And it supports the achievement of the most important goal of this kind of intervention: to provide deprived families better housing conditions, still assuring their social inclusion in the centre of cities, where they have always traditionally lived and where they mainly want to remain.

References

- Afonso, F.P. (Coord.) (2009). *O Mercado da Reabilitação Enquadramento, Relevância e Perspectivas.* AECOPS Associação de empresas de construção, obras públicas e serviços, Portugal.
- Breda-Vázquez, I., Conceição, P. (Coods.) (2015). *Levantamento e caracterização das 'Ilhas' do Porto.* Instituto da Construção, Faculdade de Engenharia da Universidade do Porto, CITTA – Centro de Investigação do Território, Trnasportes e Ambiente, Porto Domus Social, Portugal.
- Conceição, P., Breda-Vázquez, I. (Coods.) (2015). *Ilhas do Porto Programa Estratégico*. Instituto da Construção, Faculdade de Engenharia da Universidade do Porto, CITTA Centro de Investigação do Território, Transportes e Ambiente, Porto Domus Social, Portugal
- IHRU Instituto da Habitação e Reabilitação Urbana, Governo de Portugal Ministério do Ambiente, Ordenamento do Território e Energia (2015a) "Estratégia Nacional para a Habitação",
- IHRU Instituto da Habitação e da Reabilitação Urbana, Governo de Portugal Ministérios das Finanças e do Ambiente, Ordenamento do Território e Energia, European Investment Bank, Council of Europe Development Bank (2015b), "Reabilitar para Arrendar – Habitação Acessível"
- Portuguese legislation (Decree-Law n.º 307/2009; Decree-Law n.º 175/2012; Decree-Law n.º 53/2014; Decree-Law n.º 136/2014; Law nº 31/2012; Law 80/2014; Governmental order nº 1119/2009.
- Portal da Habitação, http://www.portaldahabitacao.pt, accessed in January 14, 2016.

⁷ These financial systems refer, namely, to investment priorities concerning energetic efficiency, town revitalization and urban environment, social inclusion, social innovation, regeneration of disadvantaged territories and/or institutional empowerment.