DEMAND ATTRIBUTES FOR SOCIAL HOUSING: EVIDENCE FROM HOUSING POLICY SCHEMES IN MALTA

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Abstract

The paper focuses on the key attributes that underpin demand for social housing in Malta (an EU member state) during the 2000s and the extent to which the demand for social housing is addressed by the stock of units that were offered for sale by the Maltese Housing Authority. The analysis carried out focuses on the eight sales issues that were launched by the Housing Authority between October 2002 and November 2008. The paper presents nine stylized facts that underpin underlying demand. In this regard, key attributes of demand include the fact that the group of individuals eligible to apply for units from the housing authority has been implicitly increasing steadily during the period under review. Furthermore, the major part of applicants across the different categories seem to prefer larger three-bedroom apartments even though smaller units may be adequate given the number of children and the number of persons in the household. Another key stylized fact pertains to the fact that although the volume of applicants is quite large giving rise to excess demand, paradoxically a sizeable stock of units ends up unsold. The implications of the findings are discussed. The study goes on to provides recommendations and suggestions for further research that could better guide future buyers, as well as Maltese housing policy makers in their quest to offer affordable quality housing for persons with low income, persons with disabilities, and for vulnerable persons with social and housing difficulties.

Keywords: Social Housing, housing policy, housing schemes, demand attributes, Malta

Introduction

This paper focuses on the key attributes that underpin demand for social housing in Malta and the extent to which the demand for social housing is addressed by the stock of units that are offered for sale by the Maltese Housing Authority. Malta is an island state situated in the centre of the Mediterranean Sea. It has a population of 416,055 and an area of just over 316 km^2, thus making it the most densely populated country in the European Union (EU) (NSO, 2012). Despite the fact that land supply is scarce, it has a comparatively sizeable social housing sector. Malta has a relatively high rate of home ownership and the lowest overcrowding rates for those at risk-of-poverty among the 27 EU member states (Eurostat, 2012). Despite this, an increasing number of persons in Malta are finding it harder to purchase quality housing at affordable prices since the prices are comparatively high when compared to the wages. Although there are no visible signs of homelessness, there are a few thousands that risk homelessness and the problem is hidden under the façade of strong family ties, community cohesion and the benevolent state (Vakili-Zad, 2006). Thus, meeting the housing needs of low income earners is essential in reducing the housing poverty experienced in a country (Adedeji & Olotuah, 2012).

In analysing the underlying demand for social housing in the 2000s, this paper identifies the profile and regional distribution of applicants by category of application, in conjunction with the preferences of applications in relation to the units issued. The analysis focuses on the eight sales issues that were launched by the Housing Authority between October 2002 and November 2008. One sale issue was launched every year, during the period under consideration except for 2003 when two sale issues were launched. No new sales were issued since, at least up to the end of 2012 when this study was finalised. The units of the Housing Authority are targeted for people with low income, for persons with disability, and for vulnerable persons having social and housing difficulties. The paper identifies nine stylised facts that underpin underlying demand and this represents an important milestone for the Housing Authority as it portrays the behaviour of applicants towards the Housing Authority sale issues. The analysis also brings to light the effectiveness of the conditions and allocation process of these issues, thus providing the opportunity for suggesting ways on how to improve the design and process of future sale issues.

Literature Review
Policy for home ownership

The policy of homeownership was actively endorsed by successive UK governments. According to McCord et al (2011), this policy was seen as an appeaser of social and economic disparity between higher and lower income populations and between

homeownership and non-homeownership. This policy direction was also an important part of the fabric in Malta within successive administrations. Indeed, potentially in view of Malta's colonial past, and the fact that the Government bureaucracy is largely modelled on the British model, the policy of homeownership in Malta may actually originate from the UK. Along similar lines, Ronald (2008) outlines that over time, homeownership became deeply embedded in the UK psyche as a key aspiration of households. There is little doubt that this is also a key attribute of the Maltese psyche too. Within this context, home ownership initiatives seek to help households who are on the margins of affordability in respect of owner occupation. As outlined by Carasso et al. (2005), the poorest households face additional constraints in their quest to become homeowners. In particular, the latter face greater difficulty saving the money necessary for a down payment. Moreover, they typically must pay higher interest rates due to their creditworthiness position and in the initial years monthly mortgage payments tend to be higher than the market rents for the same property.

One benefit behind subsidised house purchases that is outlined in the economic literature is that housing policy initiatives that seek to reduce housing costs for young people would help to stop the growing tendency to delay the formation of new families (Giannelli & Monfardini, 2000). Bramley and Morgan (1998) outline that in the UK, the types of home ownership initiatives employed can be classified under four generic headings: (a) grant/discount/free equity, (b) shared equity/ownership, (c) grant to subsidise costs which are greater than the value of the property, and (d) alternative mortgage arrangements. Over the period under review in this paper (i.e., 2002-2008), the first two methods were employed by the Housing Authority and more recently, the Housing Authority in Malta has also employed the latter option.

Affordability

Conceptually, affordability can be subdivided into two segments. One segment of affordability pertains to the ability of first time buyers to purchase a property. It is on this element of affordability that this paper will seek to focus. Another segment of affordability pertains to the ability of households to remain home-owners inter-temporally by being able to make repayments. Stone (2006) argued that housing affordability "is expression of the subjective social and material experiences of people, constituted as households, in relation to their individual housing situations" (p. 151). Within this context, affordability relates to the challenge each household faces when balancing the cost of its actual or potential housing, on the one hand, and the other non-housing related expenditure within the constraint of the applicable disposable income. Ong (2000) argued that the ability of homeowners to afford a

property depends on two factors - household income and the level of mortgage repayments. In this regard, outlay becomes more affordable as the household income increases and the applicable mortgage interest rate decreases.

The economic literature suggests that movement in house price affordability and the property cycle are not necessarily independent of one another. In fact, Maclennan (2009) suggested that affordability and house price volatility are inseparable. Moreover, McCord et al (2011) suggested that house price affordability tend to move concomitantly with the cyclicality of the housing market.

Although homeownership (as outlined earlier) is a key aspiration for households, some quarters are of the view that homeownership may actually be ill-suited for low income households. In fact, Pryce and Sprigings (2009) contend that by encouraging homeownership within this category, it is possible that "we are subjecting them to the worst of its costs and risks while the market may restrict for them the potential of its benefits." (p. 148) They outline that low-income households are more likely to be constrained to resort to leave homeownership at the worst point in the property cycle in that they are more likely to face economic circumstances that lead to repayment difficulties during a downturn. In this regard, affordability became a more pressing issue as the housing bubble which manifested itself in several countries in the early 2000s intensified. Affordability constraints have impacted the low earning workers severely over the last decade with a gradual decline in both the proportion and absolute number of first-time buyers being exhibited in the UK (Whitehead and Monk, 2011).

Nevertheless, the literature does outline that homeownership has its advantages. In this regard, Boehm and Schlottmann (2001) found that the level of education and subsequently income levels of children of homeowners tended to be higher than that of non-homeowners. These results are further confirmed by Haurin et al. (2002) who suggested that the cognitive outcomes of children of homeowners are superior to those of non-homeowners, even after controlling for demographic, social and economic characteristics. Moreover, Bramley and Morgan (1998) argued that although benefits from homeownership are essentially private goods, some gains from homeownership take the form of public goods. These include social stability and integration, or a better maintained housing stock.

Methodology

The scope of this study was to analyse the valid applications that were submitted under all the sale issues during the 2000s and up to 2012, when this study was conducted. During this period, eight sales issues were made available. The Housing Authority offered

five issues with units sold at subsidized prices and three issues with units offered on a shared ownership basis (one-third, two-thirds or full share of property). A breakdown of the different sale issues under analysis is outlined in Table 1.

Table 1: Applications for the Housing Authority Sale Issues of 2002-2008

Applications	Date of Issue								
	Oct-02*	Mar-03*	Nov-03*	Nov-04*	Aug-05**	Sep-06**	Nov-07**	Nov-08*	Total
Valid applications	786	791	593	802	588	916	260	117	4853
Invalid applications	84	75	36	71	51	53	25	7	402
Withdrawn applications	24	47	15	25	8	31	22	5	177
Total	**894**	**913**	**644**	**898**	**647**	**1000**	**307**	**129**	**5432**

* Units sold at Subsidized price, ** Units sold at Subsidized price on basis of shared ownership

Moreover, the allocation process employed by the Housing Authority divides different applicants into three main categories, where different units are specifically issued for a particular applicant category. Category A includes families with children, single parents with children living with them, and disabled persons. Category B includes engaged couples. Category C includes single persons, separated persons without children living with them and youths leaving institutions.

After examining the overall demand over the years, this study examines the profile of the applicants, mainly with respect to their (a) civil status, (b) income, (c) economic activity, (d) their preference in relation to the size and type of residence, and (e) the locations they accept to live in. This study also tries to better understand why a considerable number of issued units are not allocated to any applicant. In examining demand, we computed percentage and various indices (e.g., price to income ratio). In the light of the findings that emerged, the study provides a series of recommendations aimed at improving the design and process of future Housing Authority sale issues.

Results and Discussion
Trends in Demand

Table 1 shows that a structural break occurred in 2007 which resulted in a considerable decline in the total applications submitted in respect of housing unit purchases by applicants. Whereas in the period 2002-2006, the average level of valid applications per sales issue stood at around 750 applications per issue, in the period 2007-2008, the average level of applications declined considerably to a level of 190 applications per issue. This decline does not appear to be explained by the fact that the Housing Authority employed share ownership sales issue in some of the years, since the two years during which demand

was very low incorporated both types of the sales issues employed by the Authority, namely units sold at subsidized prices and units sold on the basis of shared ownership basis. The decline in demand is hard to explain, particularly in view of the sheer magnitude in the contraction in demand for units offered by the Housing authority. The decline in demand during the period 2007–2008 was more than a two-thirds retrenchment from the average levels registered in the preceding years. This decline occurred at around the same time when the climax in the house price boom was reached, and the price to income ratio started to exhibit a gradual trend downwards and property affordability started marginally improving (see Table 2). Nevertheless, it is pertinent to point out that although beyond 2006, property affordability started improving, affordability levels were still worse than the levels that prevailed in the initial year of the period under consideration. In calculating the price to income ratio (Table 2), data for prices was obtained from the Central Bank of Malta (CBM) Quarterly Reviews in index form. The index was then converted into an average price of property using the average price of property used by Falzon, Zammit and Camilleri (2005). Income data and total number of employees were obtained from Eurostat in order to calculate per capita income levels.

Table 2: Price to income ratio for flats and maisonettes (2002-2008)

Property Type	Oct-02	Mar-03	Nov-03	Nov-04	Aug-05	Sep-06	Nov-07	Nov-08
Flats	4.4	5.3	5.3	6.3	7.0	6.7	6.8	6.1
Maisonettes	6.1	6.6	6.6	7.8	8.8	8.7	8.3	7.9

The contraction in demand was registered across the three categories that are employed by the Authority. Historically, the interest in the sale issues under analysis was substantially high relative to the number of units issued for sale by the Housing Authority. Nevertheless, in the sale issues of November 2007 and November 2008, there were situations where there were more units issued on the part of the Authority than valid applications within the particular category (see Table 3).

Table 3: Ratio of number of valid applications to number of units issued by category

Year	Ratio of number of valid applications (X) to number of units issued by category (Y)									Number of Permits[1]	Number of Marriages	Permits[1] to Marriages Ratio
	Category A			Category B			Category C					
	X	Y	X/Y	X	Y	X/Y	X	Y	X/Y			
2002	83	156	1.88	99	608	6.14	13	22	1.69	4323	2240	1.93
2003	74	127	1.72	67	636	9.49	7	28	4.00	5640	2350	2.40
2003	89	128	1.4	46	432	9.39	8	33	4.1	5640	2350	2.40

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2004	82	106	1.29	48	548	11.42	9	47	5.22	6221	2402	2.59
2005	79	180	2.28	40	359	8.98	13	49	3.77	8594	2374	3.62
2006	117	310	2.65	126	511	4.06	13	75	5.77	9890	2536	3.90
2007	121	108	0.89	134	108	0.81	18	40	2.22	10957	2479	4.42
2008	69	29	0.42	68	79	1.16	15	8	0.53	6552	2482	2.64
Overall	**714**	**1144**	**1.60**	**628**	**3281**	**5.22**	**96**	**302**	**3.15**	**57817**	**19213**	**3.00**

[1]Permits of apartments and maisonettes

Thus, the decline in demand extended across all three categories under consideration. In absolute and relative terms, the highest demand during the period under consideration was registered in Category B. Therefore, engaged couples are the largest category that submitted applications to purchase their first home from the Housing Authority. The interest in the units issued for this category was, on average, more than five times higher than the stock issued during the period under review. Nevertheless, this statistic camouflages a notable structural shift that occurred during the period under analysis. In fact, although during the period from 2002 to 2006, the number of valid applications per available unit targeted for category B hovered between 4 and 11 – a signal of notable excess demand by engaged couples for Housing Authority units – the number of applications was roughly equivalent to the units issued in the last two years under analysis.

Across all categories, the level of demand was highest when affordability for property purchasers was deteriorating on an annual basis. On the other hand, once affordability started improving, the data suggests that applicants opted to rely less on the Housing Authority, as evidenced by a decline in applications submitted for the units issued. This suggests that movements in affordability are the main driver underpinning demand for Housing Authority units, rather than, the affordability level *per se*. Moreover, the rapid decline in demand in the period 2007-2008 suggests that once affordability started improving, some applicants may have opted to delay their purchase and hence adopt a 'wait and see' approach to give time to the market to recalibrate itself. Furthermore it could also be the case that as property affordability started improving, individuals preferred to purchase directly from the market and hence avoid the social stigma that may still be attached to social housing by some quarters.

A paradox emerged when analysing the price to income ratios and the ratio of permits to marriages with respect to the ratio of valid applications to units issued for category B

(engaged couples). In particular, during the period 2002–2006, the real estate market appears to have operated rather inefficiently. At the time, prices were increasing at a sustained high pace, leaving a deteriorating effect on affordability as demonstrated by increasing price-to-income ratios. This phenomenon is however hard to reconcile with the fact that during the same time, the ratio of permits per marriage was increasing in a steadfast manner too (with the number of permits increasing consistently and the number of marriages remaining relatively stable). It is pertinent to point out that during the period 2002-2006, around 2.8 permits for the building of an apartment or maisonette was being issued for every registered marriage, as outlined in Table 3. The implicit assumption underlying this rationale is that newly-weds and engaged couples mainly tend to purchase apartments and maisonettes. Logically such dynamics would suggest that the market exhibited a combination of excess supply features, increasing prices and reductions in affordability which is clearly not in sync with basic principles of efficient markets.

One can counter-argue that the yardstick used to confirm the presence of excess supply in the market is rather simplistic since it ignores the demand for new housing – typically also in the form of small properties such as apartments and maisonettes – that is underpinned by single persons, and separated or divorced couples. However, the demand from the latter sub-group would likely have been rather small and insufficient to offset the 'new' flow of excess supply that was being brought on the market. Moreover it is pertinent to point out that a stock of 'old' excess supply units had long been present in the Maltese property market. In the 1957 Census, vacant properties were 6.13 per cent of total housing stock. However, by 1995, the proportion of vacant properties in the total housing stock had increased to 23.0 per cent. In the Census of 2005, the proportion had increased further to 27.6 per cent.

One major driver behind the buoyancy in the real estate market was the fact that between 1995 and 2003, commercial banks introduced a number of changes in the form of longer repayment periods and higher potential maximum loans which increased the amount that households could bid for a particular property (Falzon et al., 2005). In fact, commenting on this step, Pace (2009) reports that when this step was suggested, "The Central Bank's governor… complained that the extension of mortgages by banks from 25 to 40 years may have facilitated the further raising of prices – but the Malta Financial Services Authority reported back [approving this extension]" (p. 360). The fact that affordability deteriorated so rapidly in the early part of the previous decade is likely to have been the major driver behind

the high level of interest exhibited by applicants in respect of units offered for sale by the Housing Authority.

Stylized facts underpinning demand
Shared ownership schemes are not particularly popular amongst engaged couples
　　　　Table 4 outlines that in the issues that constituted shared ownership (2005-2007), engaged couples represented between 41.7 per cent and 61.0 per cent of the applicants. In the other sale issues, engaged couples represented between 67.5 per cent and 80.4 per cent of the applicants. This would suggest that shared ownership is less appealing to engaged couples but more appealing to married couples, single parents and single persons.

Table 4: Percentage of valid applications by Civil Status

	Sale Issue							
Civil Status	**Oct-02**	**Mar-03**	**Nov-03**	**Nov-04**	**Aug-05***	**Sep-06***	**Nov-07***	**Nov-08**
Engaged	77.4	80.4	72.8	68.3	61.1	55.8	41.7	67.5
Married	11.8	8.2	9.5	11.5	13.3	12.6	17.8	10.3
Separated	0.1	0.6	1.9	1.8	5.3	4.2	3.9	1.7
Single parent	7.5	7.2	12.1	14.3	15.3	21.1	22.4	13.7
Divorced	0.0	0.0	0.0	0.1	0.0	0.3	0.4	0.0
Annulled	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.0
Single person	3.2	3.6	3.7	2.7	5.1	5.8	10.4	6.8
Not Declared	_	_	_	_	_	0.1	3.1	_
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

*shared ownership

　　　　This suggests that the introduction of shared ownership schemes from the year 2005 onwards was a step in the right direction on the part of the policymaker in that it enabled certain individuals who otherwise would have not been able to do so, to enter the property ladder.

The group of individuals eligible to apply for units from the housing authority has been implicitly increasing steadily during the period under review.
　　　　The target market which the Housing Authority seeks to focus on is determined, amongst other factors, by the maximum income for single and joint applicants that is imposed in the different sale issues that are carried out by the Housing Authority.

Table 5: Maximum income for single and joint applicants under the sale issues

Sale Issue	Single applicants Income (€)	Joint applicants Income (€)	House price Index [1]	Wage index	Single applicants maximum income index	Joint applicants Maximum income index
Oct-02	13976	19899	100.0	100.0	100.0	100.0
Mar-03	15141	20964	111.8	100.1	108.3	105.4
Nov-03	15141	20964	111.8	100.1	108.3	105.4
Nov-04	15141	20964	136.3	102.8	108.3	105.4
Aug-05	17470	23293	152.9	103.5	125.0	117.1
Sep-06	19800	25630	159.4	109.9	141.7	128.8

| Nov-07 | 19800 | 25623 | 159.2 | 112.1 | 141.7 | 128.8 |
| Nov-08 | 20000 | 35000 | 154.5 | 118.0 | 143.1 | 175.9 |

[1] pertaining to apartments and maisonettes

Table 5 shows that the maximum income has been increased considerably during the period 2002-2008. In fact, the maximum income that a single applicant can have in order to apply for a housing unit from the Authority was increased from around €14,000 in 2002 to €20,000 in 2008. Similarly the maximum income of joint applicants was increased from a maximum level of €20,000 in 2002 to a level of €35,000 in 2008. Changes in the maximum threshold can alter the segment of households that can apply, and hence can indirectly influence the level of demand for housing units from the Housing Authority.

The increase in property prices in Malta from 2002 to 2008 based on Quarter 2, as measured by the chain linked Laspeyres index based on the unconstrained Hedonic model was 81.4 per cent (Falzon & Lanzon, forthcoming); while the basic indices for advertised property prices for the same period showed an average price increase of 61.9 per cent and 72.7 per cent for apartments and maisonettes respectively (CBM, 2012a). Meanwhile during the same period, average wages (national accounts definition) increased by a much lower amount, registering solely an 18 per cent increase (CBM, 2012b). The latter confirms the notable deterioration in affordability that was witnessed during the period, as outlined above.

An analysis of the magnitude of increases in joint and single applicant's maximum threshold revealed that they increased by 75.9 per cent and 43.1 per cent respectively during the period 2002-2008. The latter suggests that the maximum threshold was gradually increased by the Housing Authority in line with the strong increases in house prices, and was not adjusted solely for the periodic increases registered in wages during the period. This policy implicitly resulted in a situation where the target group that was eligible to apply for units from the Housing Authority and hence purchase housing accommodation at subsidized rates was gradually being made larger. This occurred during a time where more and more individuals were finding it harder to purchase their own property and enter into the property market. This adjustment in a key policy variable on the part of the policymaker was highly commendable and is likely to be a key attribute that can explain the notable increase in demand as exhibited by the rapid rise in the absolute number of valid applicants per unit during the period 2002-2006. The latter element transcends all categories, as outlined in Table 3.

The major part of joint applicants is in employment

Table 6 shows the distribution of applicants by economic activity. It is evident that most males are gainfully occupied.

Table 6: Economic Activity of male applicants with a partner by Category (A and B)

Sale issue	Oct-02		Mar-03		Nov-03		Nov-04		Aug-05		Sept-06		Nov-07		Nov-08	
	A	B	A	B	A	B*	A	B	A	B	A	B	A	B	A	B
Employed	85	83.9	74.4	85.7	85.7	35.1	91.2	89.1	76.9	90.8	79.1	89.2	93.5	96.3	83.3	96.2
Unemployed	10.8	7.7	12.3	5.2	8.9	1.6	5.9	4.7	18	3.1	12.2	3.1	6.5	0.0	16.7	1.3
Inactive	4.3	0.0	12.3	0.3	1.8	0.5	0.0	0.0	5.1	1.1	7.8	1.0	0.0	0.9	0.0	1.3
Student	0.0	8.4	0.0	7.7	0.0	2.8	0.0	6.2	0.0	4.7	0.0	6.7	0.0	2.8	0.0	1.3
Retired	1.1	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0
N.A.	2.2	0.0	0.0	1.1	1.8	60.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

*the data for this category was not completely inputted into the data base due to time restrictions

Since the analysis concerns persons who are applying to buy a property, it is not surprising that the vast majority of the applicants are in employment. This is also partially a direct result of the framework adopted by the Authority, in that to favour applicants in employment, a high number of points were allocated to such applicants under the November 2007 sale issue. Moreover, under the sale issue of November 2008, employment was made an eligibility criterion. Although this may appear to result in a situation in which housing initiatives are not sufficiently addressing the needs of the unemployed, the fact that the policymaker favours applicants in employment is rational and appropriate in that to afford to purchase a property the household would need to be able to make repayments. This ability can only be ensured if the household has at least one member that is in employment. Other initiatives, such as subsidized rentals are more suited to target the long-term unemployed.

A surprisingly relatively high portion of single applicants in Category A and Category C are unemployed

Although most applicants are in employment, it is surprising that the percentage of unemployed applicants is considerably high amongst single applicants under Category A and Category C across all sales issues particularly under the most recent sale issues. In this regard, single females tend to have a higher unemployment and not economically active rate than men, as outlined in Table 7.

Table 7: Economic Activity of the single female applicants by Category (A and B)

Sale issue	Oct-02		Mar-03		Nov-03		Nov-04		Aug-05		Sept-06		Nov-07		Nov-08	
	A	B	A	B	A	B*	A	B	A	B	A	B	A	B	A	B
Employed	67.2	72.2	63.0	94.1	70.2	71.4	59.9	90.0	62.7	92.0	61.8	86.2	84.2	100	94.5	85.7

Unemployed	3.0	0.0	26.0	0.0	17.9	23.8	31.8	6.67	35.7	8.0	35.6	12.3	13.2	0.0	5.3	14.3
Inactive	28.4	22.2	6.9	5.9	11.9	4.80	6.8	3.00	1.6	0.0	1.8	1.5	1.3	0.0	0.0	0.0
Student	0.0	0.0	4.1	0.0	0.0	0.0	0.8	3.33	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Retired	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N.A.	0.0	5.6	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

*the data for this category was not completely inputted into the data base due to time restrictions

The fact that a considerable portion of single applicants in categories A and C are either unemployed or economically inactive is rather worrying. Applicants are essentially purchasing a property and hence in taking out a mortgage, a stable income from employment is a necessary pre-requisite to enable the individual concerned to meet the repayment commitments. It is highly questionable whether such applicants are better off purchasing a property, even though the latter would be sold at a subsidized price, rather than actually being provided with social housing at subsidized rent. It is only if a change in employment position occurs, such that the individual manages to find stable employment, that it would be wise for the individual to consider moving out of subsidized rent and seek to purchase property, potentially at a subsidized price.

The fact that a number of unemployed or economically inactive individuals are willing to commit to purchase subsidized property suggests that this feature could expose the fact that such applicants are actually working in the shadow economy. This would explain why they believe – potentially correctly – that they would be able to purchase the property and service the loan repayments. The latter calls into question the possibility that there exists the potential that part of the stock of subsidized housing that is sold by the Housing Authority ends up being purchased by individuals who actually have more financial resources than individuals who are not able to attain sufficient points that would ensure an allocation of a unit by the Housing Authority.

Applicants appear not to mind living in different regions from the ones they currently live in

The Housing Authority received 4,611 applications in the sales issues from 2002 to 2008. The regional distribution of applicants interested in purchasing a property from the Housing Authority is outlined in Table 8. Around 16.2 per cent of those applying in the different sales issues under consideration hail from Region 6 followed by 10.5 and 10.2 per cent coming from Regions 3 and 10 respectively . The rest of this paper is based only on the first seven issues because there is no data available from the last sale issue of 2008 about the topics to be discussed in the remaining sections. When applicants submit the application, they

list down their preference in relation to which units they would accept to buy taking into consideration the type of unit, size and the locality. The regional distribution of the first five preferences placed by applicants under each sale issue according to each category is outlined in Table 9.

Implicitly the first five preferences are being considered as sufficient in giving a proxy of the regions in which applicants would like to purchase a property in. Thus Table 9 sheds light on where the applicants would accept to live. It should be noted however that applicants do not have an open choice to choose any locality in Malta and Gozo but are restricted to choose a unit from those localities in which the Housing Authority issued units for sale.

Table 8: Regional distribution of applicants

Region 1	Cat A	Cat B	Cat C	Total	Percentage
1	36	126	18	180	3.9
2	124	182	20	326	7.1
3	129	320	17	486	10.5
4	106	211	23	340	7.4
5	53	173	10	236	5.1
6	166	532	48	746	16.2
7	76	296	20	392	8.5
8	83	217	27	327	7.1
9	66	290	15	371	8.1
10	92	345	34	471	10.2
11	108	309	25	442	9.6
12	42	120	9	171	3.7
13	34	81	8	123	2.7
Total	**1115**	**3202**	**294**	**4611**	**100**

Table 9: Regional Distribution of the applicants' first five preferences (2002-2007)

Region	Demand				Percentage of Total Demand (2002-2007)
	Category A	Category B	Category C	Overall	
1	68	80	39	187	0.9
2	645	605	152	1402	6.7
3	71	94	15	180	0.9
4	1394	4164	440	5998	28.5
5	315	1949	69	2333	11.1
6	514	1092	133	1739	8.3
7	285	570	61	916	4.4
8	424	2613	94	3131	14.9
9	717	1895	110	2722	12.9
10	101	398	17	516	2.5
11	253	767	28	1048	5.0
12	64	212	3	279	1.3
13	127	356	111	614	2.9
Total	4998	14795	1272	21065	100.0

Comparing the regions from where the applicants come from, to where they accept to live, applicants accept to live in different regions than the ones they currently live in. Table 9 shows that the regions with the highest number of applications were Region 4 (28.5 per cent),

Region 8 (14.9 per cent) and Region 9 (12.9 per cent), and more importantly, the majority of applicants accept to live outside their district. The question that remains unanswered is why some applicants end up refusing the offered accommodation. This clearly warrants further research before any strong conclusions can be drawn.

The majority of applicants across the different categories seem to prefer three bedroom apartments even though smaller units may be adequate given the number of children and the number of persons in the household

Table 10 shows that 88.2 per cent of applicants in Category A preferred to purchase a three-bedroom unit. Admittedly, given that Category A applicants are mainly families with children, three bedroom units tend to be the most adequate. However two bedroom units can also be adequate, depending on the number of children and their gender.

Table 10: First preference of Category A applicants in relation to size and type of unit

Sale Issue	Apartment			Maisonette			House
	(3 bed)	(2 bed)	(1 bed)	(3 bed)	(2 bed)	(1 bed)	(3 bed)
Oct-02	71	6	0	67	2	0	9
Mar-03	66	5	0	52	4	0	0
Nov-03	102	12	0	10	3	0	1
Nov-04	59	2	0	44	1	0	0
Aug-05	92	13	0	38	0	0	0
Sep-06	143	28	0	131	2	0	3
Nov-07	64	39	8	0	0	0	0
Total – units	597	105	8	342	15	0	13
% of 1st Preferences	55.3	9.7	0.7	31.7	1.4	0.0	1.2

Similarly, engaged couples under category B also tend to prefer to live in a three-bedroom unit (Table 11). In fact, a staggering 95.3 per cent of applicants prefer to live in a three-bedroom unit, even though a two bedroom apartment can be considered adequate for engaged couples especially as a starter home. These results show that the expectations of Maltese couples tend to focus more on a long term solution rather than a temporary starter home. This phenomenon transcends even in the preferences of Category C applicants (Table 12). Usually units issued for Category C applicants are one or two bedroom apartments due to their single person status. However from the preferences of the applicants, 78.3 per cent of these single applicants still opt for a three-bedroom apartment, maisonette or house.

Table 11: First preference of Category B applicants in relation to size and type of unit

Sale Issue	Apartment			Maisonette			House
	(3 bed)	(2 bed)	(1 bed)	(3 bed)	(2 bed)	(1 bed)	(3 bed)
Oct-02	113	6	0	393	7	0	89
Mar-03	195	2	0	437	1	0	0
Nov-03	254	21	0	33	10	0	114

Nov-04	77	2	0	21	0	0	1
Aug-05	98	7	0	217	0	0	0
Sep-06	137	16	0	344	5	0	17
Nov-07	57	50	0	0	0	0	0
Total – units	931	104	1	1445	23	0	221
% of 1st preferences	34.2	3.8	0.0	53.0	0.8	0.0	8.1

Table 12: First preference of Category C applicants in relation to size and type of unit

Sale Issue	Apartment			Maisonette			House
	(3 bed)	(2 bed)	(1 bed)	(3 bed)	(2 bed)	(1 bed)	(3 bed)
Oct-02	6	8	0	5	2	0	1
Mar-03	10	5	0	6	7	0	0
Nov-03	8	15	0	1	7	0	2
Nov-04	154	18	1	328	1	0	47
Aug-05	5	26	3	3	1	0	0
Sep-06	13	16	22	10	5	9	0
Nov-07	8	11	0	7	13	0	0
Total – units	204	99	26	360	36	9	50
% of 1st preferences	26.0	12.6	3.3	45.9	4.6	1.1	6.4

This behaviour could be attributed to three possible explanations. Firstly, it could be that applicants are being rational and are seeking to optimize the amount of subsidy that they get from the Housing Authority in respect of the property purchase. In essence, the larger the property, the larger the implicit subsidy in absolute terms and hence the tendency of applicants to opt for the larger three-bedroom units could be attributable to the fact that they would like to maximize the amount of subsidy they receive. Secondly, it could be that economic agents in Malta do not solely purchase a property in order to address the fundamental basic need of having shelter. Many individuals opt to purchase property for the purpose of investing (Falzon et al., 2005). In essence, property serves two purposes, namely: shelter and a saving product. However, it should be noted that recent legislation has authorised Housing Authority to buy back any house sold by it (after the law's enactment) at the same social price it sold it, limiting the use of such social housing as savings and a step up the property ladder. Thirdly, the vast majority of applicants opt for the larger three-bedroom units – even applicants in category C who are essentially single – suggesting that the applicants may not be single in reality but opt to classify themselves accordingly to attain a higher level of benefit entitlement from Government. Hence for example, a *defacto* couple may opt to register themselves as single individuals since this may likely increase the level of benefits that the female adult in the household gets in social security benefits from the State.

Category C applicants (namely: single persons, separated persons without children living with them and youths leaving institutions) tend to have a higher preference for the units which are not issued for their respective category

At application stage, applicants have to submit their preferences by giving a number ('1' as first preference, '2' as second preference, etc.) to a unit according to their liking. Applicants can give a preference to one unit or all units, and there is no limit in the application to the number of units an applicant can choose. In this analysis it is assumed that a preference from '1' to '5' indicates a serious interest on the part of the applicant with respect to a particular unit. Table 13 shows that Category C applicants tend to prefer the units that are not issued for their respective category. In fact, 69.0 per cent of the latter applicants preferred units that are not issued for category C. A corollary of this fact is that 34.6 per cent of the units issued for category C did not fall within the first five preferences of applicants under this category (see Table 14). This further confirms the serious mismatch that appears between the units issued by the Authority and the preferences of applicants. This mismatch is most acute in respect of Category C applicants.

Table 13: Demand for Category C applicants under all schemes

Region	Property Issued for C	Demand for C (pref. 1-5)	All units issued	Total demand for all units (pref. 1-5)	Demand for C as percentage of total demand	Demand for units not issued for C	Demand for units not issued for C as percentage of total demand
		(X)		(Y)	(X/Y)	(Z)	(Z/Y)
1	2	30	5	39	76.9	9	23.1
2	10	67	165	152	44.1	85	55.9
3	0	0	11	15	0.0	15	100.0
4	17	94	308	440	21.4	346	78.6
5	6	15	147	69	21.7	54	78.3
6	14	76	89	133	57.1	57	42.9
7	2	42	56	61	68.9	19	31.2
8	2	17	87	94	18.1	77	81.9
9	15	36	179	110	32.7	74	67.3
10	1	2	16	17	11.8	15	88.2
11	6	8	61	28	28.6	20	71.4
12	0	3	20	3	100.0	0	0.0
13	6	4	133	111	3.6	107	96.4
Total	81	394	1277	1272	31.0	878	69.0

Table 14: Units which have not been shortlisted by clients by Category (A, B, and C)

Sales Issue	Units issued for category A with no preference from 1-5	% of non preferred unit from total issued (Category A)	Units issued for category B with no preference from 1-5	% of non preferred unit from total issued (Category B)	Units issued for category A with no preference from 1-5	% of non preferred unit from total issued (Category C)
Oct-02	8	9.6	5	5.1	2	15.4
Mar-03	11	14.9	6	9.0	0	0.0
Nov-03	15	16.9	1	2.2	2	25.0
Nov-04	20	24.4	1	2.1	7	77.8

Aug-05	0	0.0	0	0.0	2	15.4
Sep-06	1	0.9	2	1.7	0	0.0
Nov-07	71	58.7	73	54.5	15	83.3
Overall	126	19.5	88	16.0	28	34.6

Although the volume of applicants is quite large giving rise to excess demand, paradoxically a sizeable stock of units by the Housing Authority tends to end up unsold

Despite the large number of applications received under each sale issue, the Housing Authority ended up with an average of 37 per cent of the units issued not allocated to any applicant over the sales issues under review. The procedure when a unit is allocated and refused is that the Housing Authority reallocates that unit to other applicants in line with the conditions of the scheme. However, the Authority cannot continue with reallocations forever, and therefore it has to set a limit until how many reallocations can be made. Usually this occurs up to 3 reallocations. Units are then reissued in following sales issues. The non-allocation of units occurs either because the applicants refuse the allocation, or because no one listed down the unit under his/her preference of units they wish to purchase. A total of 483 units across the different categories remained unallocated in the different sales issues occurring in the period 2002-2007. The latter includes duplicate units due to reissues of the same unit in more than one sale issue. Nevertheless, it is very surprising that notwithstanding the large number of valid applications, only a small percentage was finally allocated, implying that the Authority ends up with a stock of units that do not get allocated. Table 15 also shows that the problem of non-allocated units prevails in all categories. In fact across the different categories, non-allocated units as a percentage of units issued ranges from 35.9 per cent to 39.1 per cent across the different categories.

Table 15: Allocations accepted and units not accepted

Sale Issue	Units allocated and accepted as percentage of units issued			Units allocated as percentage of number of applications			Units not allocated as percentage of units issued		
	A	B	C	A	B	C	A	B	C
Oct-02	78.3	73.7	61.5	41.7	12.0	36.4	21.7	26.3	38.5
Mar-03	85.1	83.6	85.7	49.6	8.8	21.4	14.9	16.4	14.3
Nov-03	67.4	91.3	50.0	46.9	9.7	12.1	32.6	8.7	50.0
Nov-04	45.1	83.3	44.4	34.9	7.3	8.5	54.9	16.7	55.6
Aug-05	79.8	65.0	53.9	35.0	7.2	14.3	20.3	35.0	46.2
Sep-06	78.6	67.5	76.9	29.7	16.6	13.3	21.4	32.5	23.1
Nov-07	10.7	27.6	66.7	12.0	34.3	30.0	89.3	72.4	33.3
Total	**60.9**	**64.1**	**63.0**	**35.3**	**11.2**	**17.4**	**39.1**	**35.9**	**37.0**

Explaining why a sizeable number of units end up not allocated is difficult, in that the issue could boil down to a combination of issues. One plausible explanation could be that the

standards (such as for example, size of bathroom) of some of the units which the Housing Authority builds are not in sync with the requirements/desires of applicants. A more convincing explanation could be that a number of applicants opt to apply as a 'safety option', and only opt to purchase property from the Housing Authority if they do not find suitable accommodation within their budget from the private sector. Hence, an applicant would only be willing to purchase a unit from the Housing Authority if the applicable price is sufficiently discounted. The credibility of this proposition is further enhanced in view of the fact that a sizeable number of those interested to purchase a unit - and list down such unit within the first five preferences - still tend to refuse such allocation. Thus, from 238 refusals over the period 2002–2007, 133 (55.9 per cent) of the refusals relate to an allocation of a unit falling within the first five preferences, with 20.2 percentage points relating to an allocation of a unit listed as first preference.

In the sales issues under review, the average subsidy hovered between 15.0 to 38.0 per cent. Moreover under most sale issues, the percentage of subsidy was not constant towards all units. It could be the case that a subsidy of 15.0 per cent is not considered as a sufficient discount incentive to purchase the property from the Housing Authority by economic agents. In this regard, one should note that some individuals may hold certain reservations in respect of units built by the Housing Authority due to some social stigma in respect of the stereotype community living in housing units built by the Authority. If the latter applied, rational economic agents would only purchase such units at a sufficient price discount, which may not necessarily apply in all instances when the Housing authority sells units to applicants.

Although affordability in respect of the average applicant appears acceptable, the highest subsidized price to income ratio for each category suggests the possibility of unsustainable affordability in such borderline instances

Historically, the acceptable affordability which tends to enable households to comfortably purchase a housing unit within affordable parameters is taken to be a price to income ratio of between 6 or 7. As outlined in Table 16, the absolute majority of applicants under all schemes had an affordability ratio below this level. This confirms that in the major part of cases the Housing Authority has been effective in ensuring that the subsidies given are sufficient to ensure that low income households are not overly burdened. Notwithstanding, it is pertinent to point out that some beneficiaries' affordability ratio exceeded the average of the other beneficiaries in the same category. Moreover, if one looks at the highest subsidized price to income ratio for each category, it is clear that a substantial number of these beneficiaries did not afford to purchase the allocated unit with the income and means

declared in the application, as per outlined in Table 16. This is an issue of concern and sheds further light on the proposition outlined earlier, that some individuals may intentionally be claiming a low income in their application due to the fact that either they register as unemployed and work illegally in the shadow economy, or allege minimal income to increase the likelihood of being allocated a unit by the Housing Authority.

Table 16: Average subsidized price to income ratio by category (A, B, and C)

Sale issue	Average subsidized price to income ratio			Highest subsidized price to income ratio			% of beneficiaries with subsidized price to income ratio higher than average		
	A	B	C	A	B	C	A	B	C
Oct-02	5.4	3.5	7.6	15.6	9.8	35.1	38.0	42.0	13.0
Mar-03	6.1	4.0	3.2	28.8	17.6	5.6	38.0	29.0	66.0
Nov-03	9.4	5.1	5.2	108.8	33.7	7.6	23.0	31.0	50.0
Nov-04	5.4	4.9	3.9	12.2	15.9	6.6	49.0	38.0	50.0
Aug-05	4.6	_	5.5	17.2	_	11.1	38.0	_	43.0
Sep-06	4.1	_	2.4	21.6	_	4.3	32.0	_	22.0
Nov-07	3.4	5.5	3.6	5.1	8.7	5.3	41.0	40	33.0

Conclusion

Summary of Major Findings

The data suggests that after registering sustained demand in the first part of the last decade, in the last two years under analysis the demand for housing units issued by the Housing Authority registered a notable decline. The data shows that although the major part of applicants is in employment, a segment of applicants are unemployed or economically inactive which could be a cause of concern. A further characteristic of the underlying demand for social housing suggests that applicants prefer to go for the larger option of a three bedroom unit even though a smaller unit would suffice. Finally, it was observed that, although the volume of applicants is quite large giving rise to excess demand, paradoxically a sizeable stock of units by the Housing Authority tends to remain unsold.

Recommendations

The stylized facts discussed above give rise to a number of recommendations. From the evidence presented, most applicants accept to choose to live in a different region from where they currently live. Thus, this gives the Housing Authority some flexibility in choosing the areas where to build housing units for sale. Despite this, one needs to take into consideration that under the sales issues, applicants do not have an open choice to choose from any locality in Malta and Gozo, but are restricted to choose from those localities in which the Housing Authority issued units for sale. In this respect, it might be beneficial if the Housing Authority would conduct a survey among its prospective candidates applying for the units offered to find out their preferred localities and preferred characteristics of housing

units. It could be that the stock of unsold properties that is referred to earlier could result from various reasons such as the price, locality, or the location, the design, the size of rooms, the view from the windows, the lack of a balcony or a yard and the particular neighbourhood the apartment is located in.

A second recommendation is that more awareness should be given to applicants on the dynamics of the application process. In this regard, applicants need to understand that if their category is Category A and they apply for units issued for Category B, they are probably *prima facie* excluding the possibility of being allocated a unit. Applicants should be encouraged to choose a unit issued under their category at least for their first ten preferences. This would increase their chance that they might be allocated a unit according to their preference, and thereby lowering the stock of unsold property built by the Housing Authority.

A third recommendation is that a database of the reasons for refusals in future sale issues is created. It is being furthermore recommended that an application fee is introduced to enhance the commitment of applicants. The fee should be reasonable (e.g., €100) so as not to place a burden on applicants nor make them indifferent if they lose it. This recommendation would also address the issue of high levels of refusals outlined earlier. In this regard, it is quite problematic that applicants listing a unit as a first preference end up refusing the allocation. For those applicants that refuse the allocation without a valid reason, the fee should not be refunded.

Another important reason for refusal is that many units have been sold on plan and therefore when applicants go and actually see the allocated unit built, they might not like the design, the lighting, or size of the rooms. This issue can be solved by ensuring that all units offered for sale are built before they are issued by the Housing Authority. This will ensure that interested parties can visit the units in advance before submitting their application.

Finally, the criteria of declared employment should be enforced in a rigorous manner. Some applicants that were allocated a unit had a very high price to income ratio. This is because some units were allocated to persons who were declared unemployed or had considerably low income. Not all applicants are actually in employment, as outlined in Stylized Fact 3. The rigorous application of the aforementioned criteria would ensure that applicants would have enough future income to be able to repay the bank loan on a regular basis, and that the repayment affordability will minimize the future financial burden of applicants.

Suggestions for Further Research

From this study, various avenues for further research emerge. An in-depth survey on the needs and desires of the end clients would better guide policy makers in their attempts to ensure that the stock of units that ends up unsold, as per outlined in Stylized Fact 8, is minimized as much as possible. It would also be interesting to investigate whether the lowering of the demand resulted from a shift in the demand to private provision as a sort of 'forced privatisation' turning to the 'unsubsidized' private market because the social housing market was not a favourable or attractive enough option. Finally, the Housing Authority needs to seriously consider whether the building of new units for future sale issues is feasible. The problem of increasing vacant properties on the island needs to be tackled seriously and effectively since this is part of our limited environment being wasted and could be utilized for the benefit of those in need of social housing. Incentives need to be devised to encourage landlords to rent out their property rather than preferring to leave them empty. Such studies would better equip the Housing Authority in formulating an effective housing strategy which attempts to provide decent housing to strengthen our community and to provide a better setting in which to raise our children, whilst abiding to other objectives such as efficient use of land and housing, as well as environmental conservation.

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