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Disclaimer:

I responsibly declare that all information presented to this study have been obtained, processed, and presented according to the rules and principles of the academic code of conduct and the laws that govern scientific research and intellectual property. I also declare that as required from the above rules, I mention and reference all the sources of the information that I use and do not constitute my original creation. The approval of the present study from the School of Architecture, Engineering, Land and Environmental Sciences of Neapolis University - Paphos, does not necessarily imply the acceptance of the opinions of the author on behalf of the University.

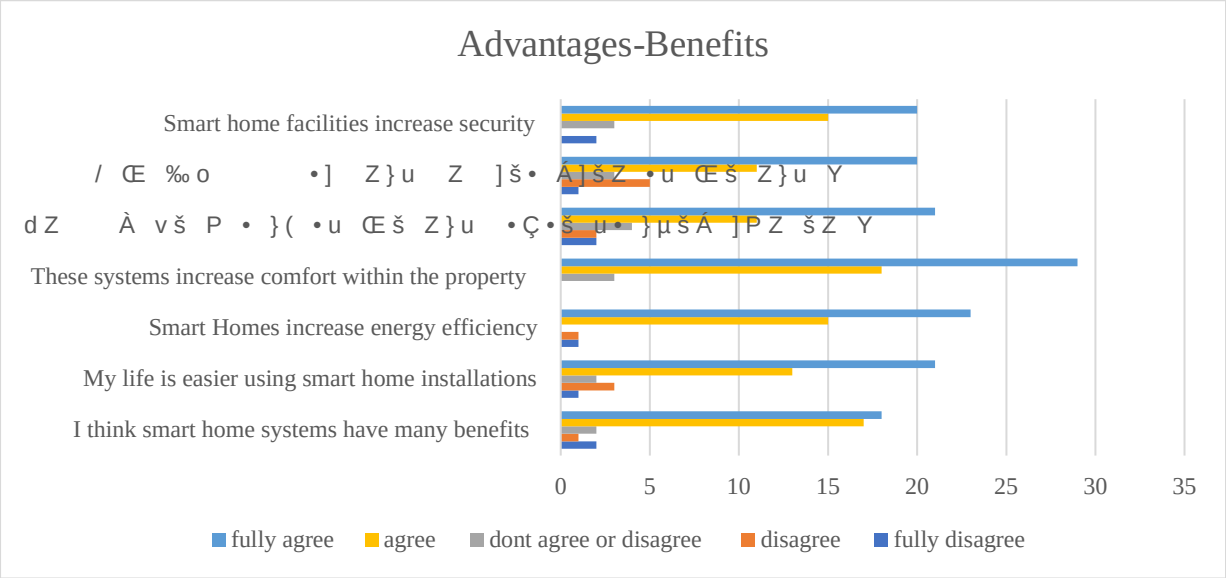

Table 1: Participants -Benefits of Smart Homes

The results indicate that there are three pillars in which consumers base their preference to these systems. The most important element that emerges through the results is comfort, in which people believe that by installing these systems their comfort within the property will increase. However, although comfort is within their preferences it is not clear if they are willing to pay an extra premium for this comfort. The second most important aspect is that consumers believe that one of the main benefits of these systems is that it will help them save energy and by the responses it is shown that already some of the basic ³ K R PKHD E Ha ve been replaced with automations.

Furthermore, an additional factor that is considered to be one of the most important pillars is security. More specifically the consumers believe that their security is increased with smart homes and one of the most sought-after elements is, is the control of their security through sensors, cameras (if possible) and alarm notifications.

In general, the perception that the advantages of smart home outweigh the disadvantages, prevails and by the results it is clear that the majority of the participants support that their life is easier using smart home installations.

Although it is clear that the participants are in favor of these systems, when the pricing factor comes into the picture it is not certain whether they will choose to install these systems or not. This is further studied in Research Question 3.

4.2.2 Research Question 2- &DQ WKHVH EHQHILWV DIIHFW D SURVSHFW

In order to test whether the benefits of smart home systems affect a buyers decision and whether there is a relationship between them, a correlation analysis was conducted between Variable B1.3 (buy decision) and all the questions of B4 (benefits). To effectively perform the correlation analysis, all the questions of B4 which measure the benefits were transformed into one variable using the transform -compute variable option and the variable was named (BENEFITSALL). A correlation analysis was then conducted and the results indicated that there is a strong correlation between the decision to buy and the benefits of smart homes $r(38) = .51$ $p = .001$. Therefore, SURVSHFWLYH EX\HUV LV OLQNHG ZLWK WKH EHQHILWV RI D smart home system.

Correlations

		B1.3	BENEFITSALL
B1.3	Pearson Correlation	1	.518**
	Sig. (2-tailed)		.001
	N	40	40
BENEFITSALL	Pearson Correlation	.518**	1
	Sig. (2-tailed)	.001	
	N	40	40

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2: Correlation Analysis -Benefits and decision to buy

As with the previous research Question it is shown that participants prefer smart homes because of the comfort, security, and the general benefits they perceive from the installation of these systems. Although this is an important conclusion, will a prospective buyer consider smart home facility as the dominant factor to base their decision? Will their preference remain the same if their comfort is affected by possible techical faults that may arise, which is a common characteristic of systems of this nature?

4.2.3 Research Question 3- Perception in terms of the impact of smart homes on cost and price

To test the perception of impact of Smart Homes on price and cost all the items of Question B2 were considered

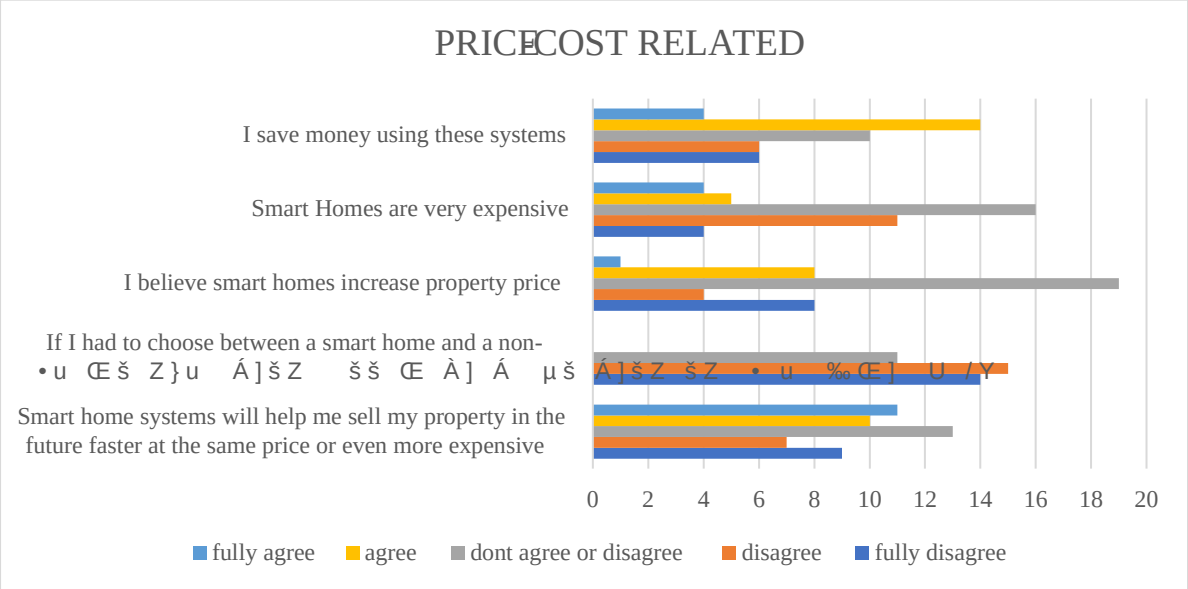

Table 3: Participants -Price and Cost perception

The results indicate that surprisingly the majority of the participants believe that smart home systems do not increase the property price and that although smart home inclusion might help them in selling their property faster in the future, it will not help them sell their property in a higher price. As questioned in the above Research Question it is proved that smart home system is not the dominant factor in which perspective buyers will base their decision on buying a home. More specifically, the participants mainly disagree that if they had to choose between a house with a view and a house with a smart home, they would choose the smart home.

However, on the other hand, they believe that by using these systems they save money but on the contrary, they believe that Smart Home Systems are very expensive.

In order to further test the impact of smart home on price and whether smart home price (B2.4) affects property price (B2.3), a correlation analysis was conducted. The correlation analysis showed that there is no statistical difference ($p > .01$) between the two variables, therefore it is safe

to say that there is a perception between the participants that the amount spend for smart home systems does not affect property price in a degree which would be of an essence.

These results indicate that although the participants believe that Smart Homes in nowadays are considered to be an essential element in a house, it is not essential element in terms of pricing a property, although sometimes these systems might be expensive. It is accepted though that it is an extra specification that gives an advantage to a property in general.

4.2.4 Research Question 4 - Is perception for Smart Homes related with savings?

In order to statistically test whether prospective buyers believe they will save money with smart home systems and whether it affects their perception for these systems, a One way ANOVA was conducted between the perception of the participants and their belief on the savings of the systems. In order to achieve this, all the questions of B1 that were related with the perception were transformed into one variable using the transform compute variable option (PERCEPTION). The belief on the savings was then categorized into 3 groups using variable B2.5. The participants were categorized into 3 groups based on their response to item B2.5. Group 1 included participants which fully disagree and disagree that smart home systems help them save money and in that case they selected options 1 and 2 on the questionnaire likert scale. Group 2 included all the participants that were neutral to this question and answered that they do not disagree or agree and Group 3 included participants that agree and fully agree on this and selected options 4 and 5 on the questionnaire.

The results showed that there is a statistical difference ($p<0.05$), between the perception on the smart homes and savings. More specifically though post hoc tests that were generated, it seems there is a statistical difference ($p<0.05$), between the ones that believe they do not save and the ones that believe they save and no statistical difference between the participants that are neutral.

These results indicate that there is a statistical difference between the perception for Smart Homes and the savings participants believe they benefit from, by using these systems. Therefore, the perception is somehow related with savings. However, taking into account the means of the responses, the perception is not affected in a major degree by the savings they achieve. Therefore, it raises a question on whether savings is the crucial factor that will make an LPSDFW LQWR D SURVSHFWLYH EX\HU¶V GHFLVLRQ

4.2.5 Research Question 5 – What are the main disadvantages of Smart Home Systems?

As for the main disadvantages, 47% (n=19) of the participants believe that these systems are sometimes not user friendly and a large percentage, 25% (n=10), controls the system mainly from their phones because they find the main console not that easy. However, on the other hand, 25% (n=10) of the sample disagrees with this opinion and 40% (n=16) disagree that there are configuration and connectivity problems regularly. In this perspective taking into account the responses in Research Question 1, in terms of the comfort offered by these systems, user friendliness is an aspect which might be a problem in the future and achieve the opposite result of comfort.

One additional important aspect that has been studied by the items in Question 3, is the safety of these systems and whether they can be breached easily. In this view 45% (n=18) of the participants disagrees that their personal data are not safe and 60% (n=24) are of the opinion that smart homes cannot be breached easily.

Although this is the general opinion of the participants, due to the fact that this is a survey between a relatively small group and within the scope of residential dwellings only, it is a question that must be raised on a broader context taking into account other types of property also.