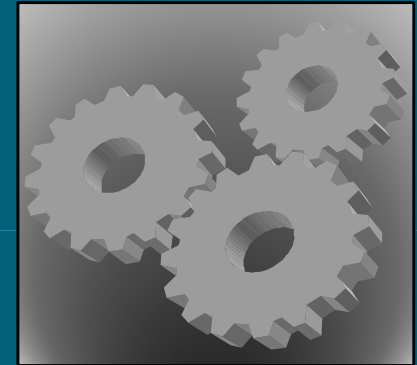# RELEVANCE OF USABILITY TO DEVELOPMENT OF CELLULAR TECHNOLOGY

By

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INTRODUCTION

Usability is an important factor in ICT. **Usability** defines the actual performance of intended task by a particular product. It directly translates to the differentiation of the levels of end user satisfaction. In the mobile telephone industry there is fierce competition for customers. As such customer satisfaction differentiates firms results.

RESEARCH PROBLEM

The research problem was to identify the relation of usability of mobile technology to the adoption, usage of both existing and emerging mobile technologies. The research purposed to identify the relation between the citizen attitude/aptitude, perception of mobile technology and the impact of these factors on both existing and emerging mobile technologies in terms of adoption, use, frequency of use and durations of use.

OBJECTIVES

1. To determine the impact of previous experience on use of mobile technologies.
2. To determine the preferred mode of usage of mobile technologies.
3. To asses ownership history and future use intention of mobile technologies.
4. To understand influence of the environment on the potential mobile technology adopter.
5. To develop a model to enable the comprehension of significant factors that impact adoption of mobile technologies.

RESEARCH QUESTIONS

1. How does previous experience affect adoption of mobile technologies?
2. What is the major use of mobile technologies ?
3. What is the ownership behavior and future intention of individuals as regards adoption of mobile technologies ?
4. How does the environment influence the potential mobile technology adopter ?
5. What is a comprehensive approach as regards adoption of mobile technologies ?

HYPOTHESIS

- H1:Organizational support determines current mobile technology usage.
- H2:Percieved usefulness determines current mobile technology usage
- H3:Percieved ease of use determines current mobile technology usage
- H4:Percieved compatibility determines current mobile technology use
- H5:Economic factors affect current mobile technology use
- H6:Current technology use affects mobile technology future use intention

Adoption process: *Knowledge , Persuasion ,Decision, Implementation,*
Confirmation.
Key theories are:

a). Technology acceptance   **c). Self –efficacy theory**
   model
b). Theory of reasoned   **d). Cost -benefit paradigm**
   action
e). **Triandis theory.**   **f). Theory of planned behavior**

g). Normalization theory.

Population of the study

The population composed of 120 professionals drawn from major corporations in the private and public sectors aged between 20 and 40.

Data collection

Both primary and secondary data were used for the study. More so historical data was only used to accord guidance. The questionnaires, addressed usability and adoption. The questionnaires are composed of both closed and open ended questions.

Sampling Methodology

A total of 120 respondents was selected for inclusion in this study .

Various sampling techniques were be used in this study.

Research Instruments

To collect data questionnaires were used. The instruments were be pilot tested on a small sample group .

Data Analysis

This study combined quantitative and qualitative data. After data was collected it was checked ,coded and analyzed using SPSS statistical package.

WORKING MODEL-CONTEMPORARY INTEGRATIVE

TECHNOLOGY ACCEPTANCE FRAMEWORK
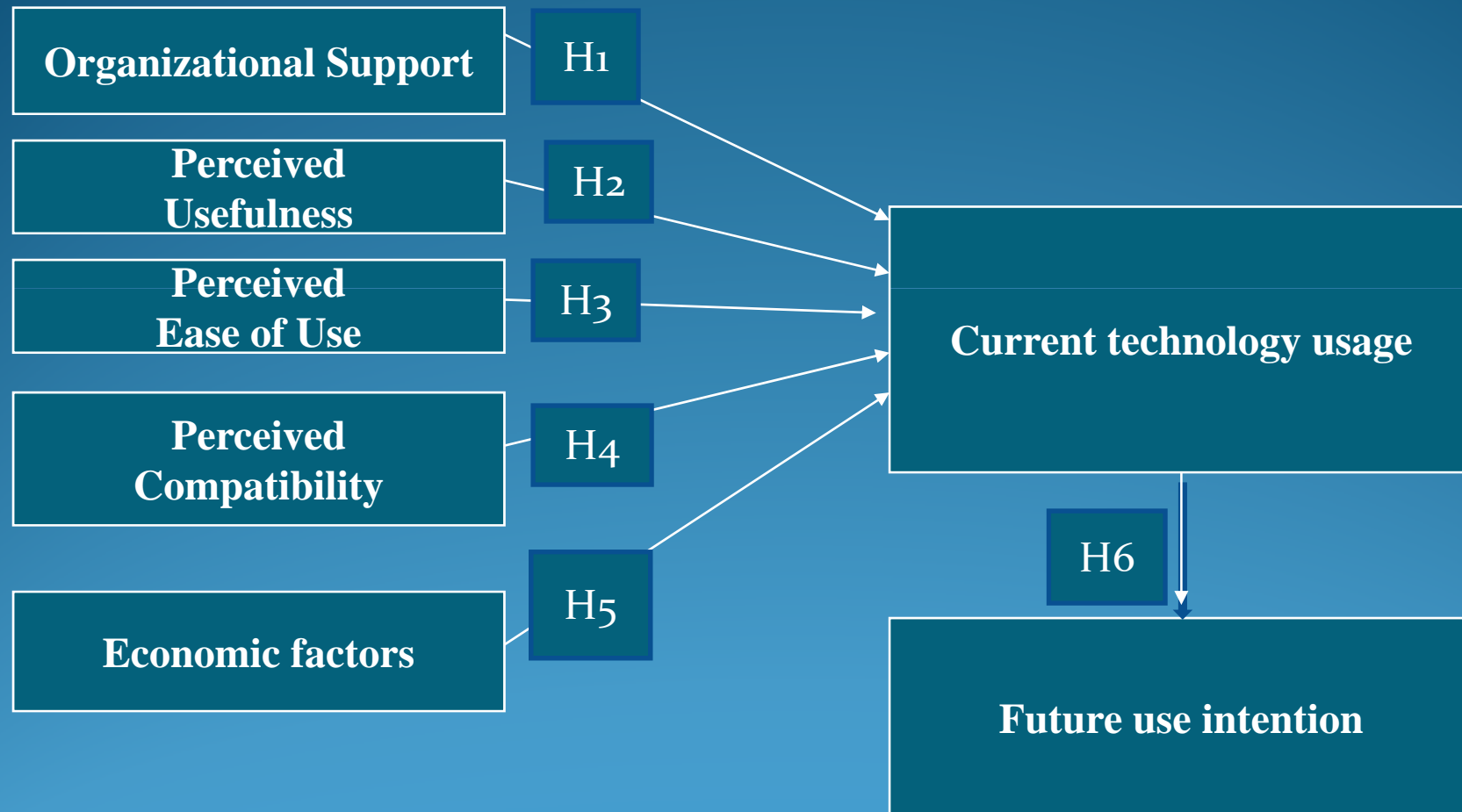
HYPOTHESIS	RESULT	ACCEPT	REJECT
ORGANISATIONAL SUPPORT	H1(PRIVATE)0.042		REJECT
PERCIEVED USEFULNESS	H2(PRIVATE)0.417	ACCEPT	
PERCIEVED EASE OF USE	H3(PRIVATE)0.383	ACCEPT	
PERCIEVED COMPATIBILITY	H4(PRIVATE)0.559	ACCEPT	
ECONOMIC FACTORS	H6(PRIVATE)0.092	ACCEPT	
FUTURE USE	H7(PRIVATE)0.000		REJECT

HYPOTHESIS	RESULT	ACCEPT	REJECT
ORGANISATIONAL SUPPORT	H1(PUBLIC)0.282	ACCEPT	
PERCIEVED USEFULNESS	H2(PUBLIC)0.490	ACCEPT	
PERCIEVED EASE OF USE	H3(PUBLIC)0.255	ACCEPT	
PERCIEVED COMPATIBILITY	H4(PUBLIC)0.294	ACCEPT	
ECONOMIC FACTORS	H6(PUBLIC)0.045		REJECT
FUTURE USE	H7(PUBLIC)0.000		REJECT

PROPOSED DERIVED ANALYTICAL MOBILE PHONE ADOPTION MODEL
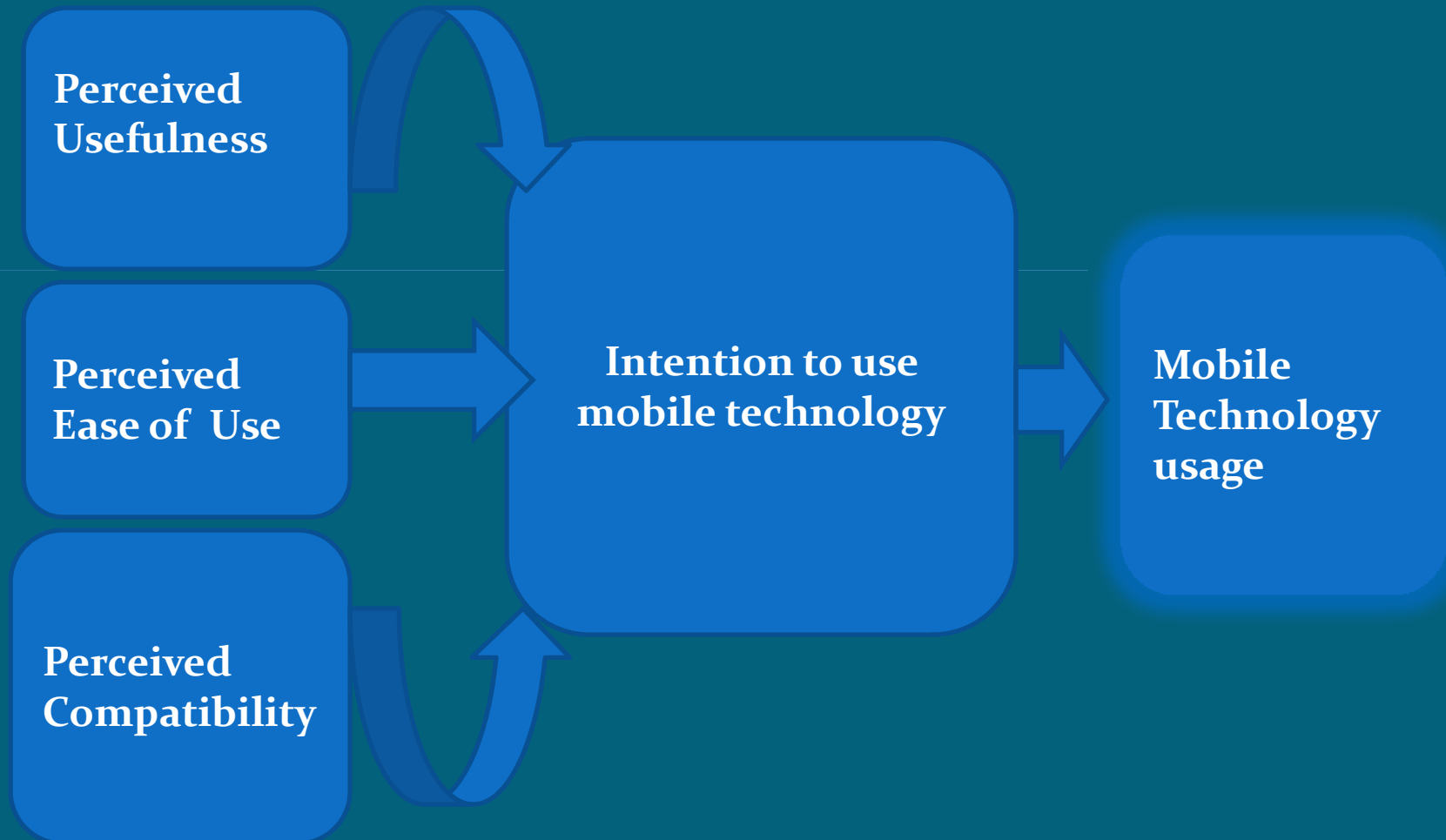
Brand: It is established that Nokia has the greatest brand value,43 percent, followed by motorolla,22 percent, Samsung,13 percent, Sony Eriksson and blackberry in descending fashion.

Usability: SMS use was the most preferred mode of usage of   phones as a mode of communication. Voice calls was second. Data transfers   came in third. Net usage on phones came in at position four .

Experience: From those who were sampled it was established that the majority 60 percent actually had used similar phones in the past as such they had   experience as regards the use of such applications.

Ownership history and future use intention : Most persons have owned a single phone over the past 12 months. It was followed by ownership of   two phones. Most persons   intimated   a likelihood 75% of purchasing new handsets over the coming 6 months.

Environmental influence : Friends   are   greatest influencers.

MODEL ANALYSIS

Supportive services: For the private sector the result is insignificant, hence we reject the hypothesis. For the public sector the result is significant we thus accept the hypothesis,H1.

Perceived usefulness: For both the private and the public sectors the value is significant we thus accept the hypothesis,H2.

Perceived ease of use: For both the private and public sectors the value is significant ,we thus accept the hypothesis,H3.

Perceived compatibility: In both the private and the public sectors the values are significant we thus accept the hypothesis,H4.

Economic factors: The values are significant for the private but fail for the case of the public sector hence the hypothesis is accepted,H5.

Future use: For both classes the result is insignificant ,the hypothesis is rejected.

SIGNIFICANCE TO MOBILE INDUSTRY/RECOMMENDATIONS

Perceived usefulness (Portable Entertainment):

That for customers to acquire new technologies there ought to be a sense of greater perceived usefulness in comparison with existing technologies.

Perceived ease of use:

That for technologies to be relevant, significant they ought to free the user from effort so as to increase his level of relaxation whilst using a particular technology.

Brand significance:

That there are stronger brands than others is without a doubt. This factor is crucial and has to be taken into consideration when planning by a technology firm.

Marketing:

That the appropriate medium of communication has to be accessed and relied on to pass the information from the manufacturer to the consumer for there to be a significant impact of the desired product

Monitoring and progress report:

That information herein can be used to assess the market and to gauge the progress of policies already in place.

Recommendations/Future research

- Exploration of impact of the non-static dynamic nature of technology on the continual use and adoption of technology.
- Analyzing the technical capabilities of different wireless technologies and determining their suitability for developing nations in terms of the contextual needs.
- Development of a comprehensive understanding of the diverse influences studied here, refining measurement of the core constructs used in the model, and understanding the organizational out-comes associated with new technology use.

Closing remarks

The mobile era has arrived all applications are converging to operate at the mobile level. Personalization and mass customization will differentiate the market leader from the pack.

Thank you .