

FACULTAD DE INGENIERÍA

Escuela Académico Profesional de Ingeniería Empresarial

Tesis

**Chakri: Mobile application to reduce dependence
on intermediaries in the marketing of products in
family farming**

Alexandra Fátima Rocha Damian
Ivan Edison Mallque Gomez
Samuel Illapa Bellido Contreras
Pedro Segundo Castañeda Vargas

Para optar el Título Profesional de
Ingeniero Empresarial

Huancayo, 2023

Repositorio Institucional Continental
Tesis digital



Esta obra está bajo una Licencia "Creative Commons Atribución 4.0 Internacional" .

Chakri: Mobile application to reduce dependence on intermediaries in the marketing of products in family farming

INFORME DE ORIGINALIDAD

6%

INDICE DE SIMILITUD

6%

FUENTES DE INTERNET

6%

PUBLICACIONES

3%

TRABAJOS DEL ESTUDIANTE

FUENTES PRIMARIAS

1	repository.ubharajaya.ac.id Fuente de Internet	4%
2	Alexandra Gianella Ladera-Mejia, Xiomara Stephanie Pun-Gutierrez, Juan Carlos Quiroz-Flores, Alberto Enrique Flores-Perez. "Digital Transformation Model Based on Business Process Management and Lean Manufacturing to Increase the Productivity of the Administrative Area of a Peruvian Aeronautical Company", Proceedings of the 8th International Conference on Industrial and Business Engineering, 2022 Publicación	1%
3	www.researchgate.net Fuente de Internet	<1%
4	www.knoholem.eu Fuente de Internet	<1%
5	www.mdpi.com Fuente de Internet	<1%

Excluir citas Activo

Excluir coincidencias Apagado

Excluir bibliografía Activo



Chakri: Mobile application to reduce dependence on intermediaries in the marketing of products in family farming

Alexandra F. Rocha

Faculty of Business Engineering, Continental University
73507505@continental.edu.pe

Samuel I. Bellido-Contreras

Faculty of Systems Engineering, Continental University
75092993@continental.edu.pe

Ivan E. Mallque

Faculty of Business Engineering, Continental University
75263330@continental.edu.pe

Pedro S. Castañeda

Faculty of Systems Engineering, Continental University;
Faculty of Business Engineering, Continental University
pcastaneda@continental.edu.pe

ABSTRACT

In Peru and the world, agriculture is one of the main sources of work. Specifically, family farming is the one that contributes more than 80% of food productions worldwide, despite this this sector has been facing various problems among which is the deposition of intermediaries for the sale of their products. In developing countries such as Peru, this situation means that the income received by family farmers is not fair due to little bargaining power, misinformation, and little connection with actors in the value chain. Faced with this, a mobile application was developed or "Chakri" that aims to reduce the dependence on intermediaries in family farming. This application was developed using the SCRUM methodology which allowed to receive feedback constantly during each sprint. Once the development stage was completed, a survey of 30 farmers was carried out to validate the criteria of usability and satisfaction of use of the application, in the same way as it happened with 50 buyers. It was evidenced that 72% of family farmers and 72% of buyers said they "Agree" with the usability of the application, while 73% of farmers and 71% of buyers said they "Agree" with the satisfaction of using the application. These results show the acceptance of the mobile application "Chakri" as a solution to the identified problem.

CCS CONCEPTS

• **Applied computing** → Computers in other domains; Agriculture.

KEYWORDS

Mobile applications, family farming, intermediaries, agricultural value chain

ACM Reference Format:

Alexandra F. Rocha, Ivan E. Mallque, Samuel I. Bellido-Contreras, and Pedro S. Castañeda. 2022. Chakri: Mobile application to reduce dependence on intermediaries in the marketing of products in family farming. In *2022 The 8th International Conference on Industrial and Business Engineering (ICIBE 2022, September 27–29, 2022, Macau, China)*

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for components of this work owned by others than ACM must be honored. Abstracting with credit is permitted. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee. Request permissions from permissions@acm.org.

ICIBE 2022, September 27–29, 2022, Macau, China

© 2022 Association for Computing Machinery.

ACM ISBN 978-1-4503-9758-2/22/09...\$15.00

<https://doi.org/10.1145/3568834.3568908>

2022), September 27–29, 2022, Macau, China. ACM, New York, NY, USA, 7 pages. <https://doi.org/10.1145/3568834.3568908>

1 INTRODUCTION

Agriculture plays a very important role in economic growth worldwide. According to figures from the World Bank in 2018, the agricultural sector was responsible for 4% of world GDP while it assumed a little more than 25% of GDP in developing countries. [1] Specifically, family farming characterized by being one in which there are limited resources for its development and in which mostly a family nucleus intervenes [2], it contributes incredibly more than 80% of food productions worldwide [3], making it a sector of utmost importance because it provides work to many people[4] and also preserves food generation by generation and the culture of the place.

At the national level, in Peru, agricultural production is one of the main sources of work[5], especially family farming accounts for 97% of the total agricultural units throughout the country[6], which means that most Peruvians depend on it. This sector is currently facing many problems due to external or internal factors which make the effort being made by farmers unprofitable. This has the consequence that farmers have a low profit to cover their basic needs and invest to continue with the agricultural production to which they are dedicated. In most developing countries, intermediaries are considered a problem for agriculture, since, although it is true that they provide liquidity, transport and distribution, many times the work done does not justify the margin they obtain from the agricultural value chain compared to other actors. Among the internal factors that aggravate this situation is the abuse of power of intermediaries [7] within the value chain indicates that they are the ones who set the final price, which is accepted by farmers quickly so that their harvest does not spoil. Another factor is the difficulty with which farmers contact other actors in the value chain, the little technological innovation in the sector, post-harvest processes and disorderly markets, and the little access to market information by farmers. [8] All these factors cause intermediaries to be necessary in family farming in developing countries such as Peru, although this may mean a lower profit margin for the farmer, which affects his quality of life, and a higher price for the final consumer. To avoid the problem, many authors, governors, and entities claim that shorter chains should be used in agriculture to get the producer to the final consumer.[9]