



---

## Applicability of non-intensive innovation in the coffee, guava and raw sugar cane production in Colombia

---

Vivian Ginneth Sánchez Ovalle,  
Andrea Yohana Rodríguez Delgado, William Pérez Yucuna and  
Diana Johana Mesa Fandiño

EasyChair preprints are intended for rapid  
dissemination of research results and are  
integrated with the rest of EasyChair.

# Applicability of non-intensive innovation in the coffee, guava and raw sugar cane production in Colombia

**KEY WORDS:** COFFEE, RAW SUGAR CANE, GUAVA, INNOVATION, NON-INTENSIVE INNOVATION

**AUTHORS:** VIVIAN GINNETH SÁNCHEZ OVALLE\* - ANDREA YOHANA RODRÍGUEZ\*\* - WILLIAM PÉREZ YUCUNA\*\*\* - DIANA JOHANA MESA FANDIÑO\*\*\*\*

## ABSTRACT

---

The University Corporation Minuto de Dios-UNIMINUTO- through the faculty of Business Sciences, specifically the Business Administration program in the face to face modality, has developed a macro-research project titled "*Quantification of the Multiplier Effect of the Capabilities of Soft Innovation in the Enterprise and its Effect on the Iberoamerican progress and welfare (CEMCIL)*". This project is linked to the "Management, Participation and Development – GEPADES MD" research group.

The present research article highlights some of the findings of the junior research group. Its aim is to show the findings from a systematic literature revision about non-intensive innovation practices in the coffee, guava and raw sugar cane distribution chains at a national level. According to Abreu, (2012) exploratory research is done in order to increase the knowledge about slight innovation, which was defined by Blanco Mesa & Baier Fuentes (2017), applied to those three particular products; in this way, the aim is to study the variables or factors that could be related to slight innovation, in each of the named products.

It is well known that innovation is one of the fundamental pillars for economic and societies' development. It is influenced by the social dynamics and the behavior of consumers who are looking for access to products and essential services which are cheap and have a good presentation.

With regards to the products that are analyzed in this research, coffee is considered a dynamic product in the Colombian economy that contributes to economic evolution, job creation and to the stability of the coffee producing regions of the country; thus, evidence from the year 2017 showed that it was a product that highly contributed to the growth of the Colombian economy. However, even though coffee is one the most recognized products

worldwide and of the national economy, the new world economic dynamics, in the case of the coffee sector, brought a substantial decrease in the participation of the GDP in the last years.

On the other hand, in the case of guava and in relation to light innovation there was hardly any evidence in Colombia and Latin America according to the literature review. Instead, many cases about technological innovation were found, as well as improvements in water usage, organic compost application, genetic improvement and the prevention of frost-bites in guava crops.

Finally, with regards to raw sugar cane, it was found that production significantly changed in the last few years, given the improvements in terms of quality and transformation of the product. Furthermore, the time of the productive process has been minimized, associative work between actors has been implemented and there have been improvements in the marketing strategies in order to respond to market demands.

Thus, this article aims to show the essence of the slight innovation concept in three fundamental products of the Colombian economy. The purpose of slight innovation is to be able to optimize existing resources to generate products and services directed at specific markets. It includes elements such as creativity and the transfer and knowledge diffusion between the different interest groups, which can also contribute to value creation through the resolution of problems meeting organizational and social needs.

## REFERENCES

- Arango Gaviria, O. (2013). El paisaje cultural cafetero:Una aproximación desde la institucionalidad emergente. *POLITICAS DE VIVIENDA Y DERECHOS HABITACIONALES. Reflexiones sobre la justicia Espacial en la Ciudad Latinoamericana.*
- Café de Colombia. (2009). *cafedecolombia.com*. Obtenido de [http://www.cafedecolombia.com/congresocafetero/2009/04.Informe\\_GG\\_2009\\_Competitividad\\_e\\_innovacion.pdf](http://www.cafedecolombia.com/congresocafetero/2009/04.Informe_GG_2009_Competitividad_e_innovacion.pdf)
- Cano Sanz , C. G., Vallejo Mejía, C., Caicedo García , E., Amador Torres, J. S., & Tique Calderon , E. Y. (2012). El mercado mundial del café y su impacto en Colombia. *Borradores de economía.*
- Cárdenas Franco, L. F., Espinosa Becerra, N., González Pulido, O. V., & Guasca Parra, I. C. (2016). Influencia de la tecnificación panelera en los medios de vida de los productores rurales en la vereda Junco, San Benito (Santander). *Revista de Sociología y Antropología: VIRAJES*, 115-136.
- Castellanos , O. F., Fúquene M., A., Fonseca R., S. L., Ramírez M., D. C., Giraldo T., P., & Valencia , M. (2011). *Estudio de la cadena productiva de la guayaba-Bocadillo en la hoyo del río Suárez*. Bogotá: Universidad Nacional de Colombia .
- Castellanos, O. F., Torres, L. M., & Florez, D. H. (2009). *Agenda prospectiva de investigación y desarrollo tecnológico para la cadena productiva de la panela y su agroindustria en Colombia*. Universidad Nacional de Colombia - Biogestión.
- Echavarría, J. J. (2014). *Informe de la misión de estudios para la competitividad de la caficultura en Colombia*. Bogotá: Universidad del Rosario.
- Federación de Cafeteros, C. (17 de Julio de 2018). *Federación de Cafeteros*. Obtenido de [https://www.federaciondecafeteros.org/clientes/es/sala\\_de\\_prensa/detalle/gobierno\\_y\\_federacion\\_de\\_cafeteros\\_firman\\_acuerdo\\_por\\_la\\_prosperidad\\_cafete/](https://www.federaciondecafeteros.org/clientes/es/sala_de_prensa/detalle/gobierno_y_federacion_de_cafeteros_firman_acuerdo_por_la_prosperidad_cafete/)
- Federación Nacional de Cafeteros. (2017). *Comportamiento de la Industria Cafetera 2017*.
- Federación Nacional de Productores de Panela - Fedepanela. (2012). *Informe técnico del subsector panelero de Colombia*.
- González, M. (2010). Café de Colombia. *Global environment of business*, 11.
- Guerrero Useda, M. E., & Escobar Guzmán, J. D. (2015). Eficiencia Técnica de la producción de la Panela. *Revista de Tecnología*, 107-116.
- Melgarejo, L. M., Romero, H. M., Insuasty, O., Hernández, M. S., Fernández Trujillo,, J. P., & Solarte, M. E. (2010). *Desarrollo de productos funcionales promisorios a partir de la Guayaba (psidium Guajava L.) para el fortalecimiento de la cadena productiva* . Obtenido de [http://quimicanova.sbj.org.br/imagebank/pdf/Vol32No6\\_1517\\_29-AR08432.pdf](http://quimicanova.sbj.org.br/imagebank/pdf/Vol32No6_1517_29-AR08432.pdf)

- Mosquera, S. A., Carrera, J. E., & Villada, H. S. (2007). Variables que afectan la calidad de la panela procesada en el departamento del Cauca. *Facultad de Ciencias Agropecuarias V. 5*, 17-27.
- Muñoz Ortega, L. G. (2014). Caficultura sostenible, moderna y competitiva. *Ensayos sobre economía cafetera*.
- Murcia Pardo, M. L., & Ramirez Duran , J. (2007). Revisión del sistema regional de producción de semilla de caña para la agroindustria panelera en Boyacá y Santander. *Corpoica Cienc Tecnol Agropecuaria, Mosquera*, 75-87.
- Narvaez Cuenca , C. E., Restrepo Sanchez , D. C., & Restrepo Sanchez , L. P. (2009). *Extracción de compuestos con actividad antioxidante del fruto de guayaba cultivada en Vélez-Santander, Colombia*. Obtenido de [http://quimicanova.sbz.org.br/imagebank/pdf/Vol32No6\\_1517\\_29-AR08432.pdf](http://quimicanova.sbz.org.br/imagebank/pdf/Vol32No6_1517_29-AR08432.pdf)
- Observatorio Agricadenas, C. (2005). *La cadena del café en Colombia*. Bogotá: Ministerio de Agricultura y desarrollo rural.
- OEC. (17 de 07 de 2018). *Atlas Media* . Obtenido de [https://atlas.media.mit.edu/es/visualize/tree\\_map/hs92/export/show/all/0901/2016/](https://atlas.media.mit.edu/es/visualize/tree_map/hs92/export/show/all/0901/2016/)
- Organización de las Naciones Unidas para la Alimentación y la Agricultura. (2003). *FAO. (s.f.)*. Obtenido de [http://www.fao.org/fao-who-codexalimentarius/sh-proxy/fr/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCODEX%2BSTAN%2B215-1999%252FCXS\\_215s.pdf](http://www.fao.org/fao-who-codexalimentarius/sh-proxy/fr/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCODEX%2BSTAN%2B215-1999%252FCXS_215s.pdf)
- Panhuyzen, S., & Pierrot, J. (2014). Barómetro de Café 2014. *Federación Nacional de Cafeteros* , 99-125.
- Perdomo, J. A., & Mendieta, J. C. (2007). Factores que afectan la eficiencia técnica y asignativa en el sector cafetero colombiano: una aplicación con análisis envolvente de datos. *Desarrollo y Sociedad*, 1-45.
- Piñeros, C. (2016). *El sector cafetero colombiano como economía periférica en el sistema mundial de Wallerstein entre los años 2000 a 2014*. Bogotá: Universidad Militar Nueva Granada.
- Pombo, C. (21 de 08 de 2015). *El Blog del BID para conversar sobre innovación en América Latina y el Caribe*. Obtenido de <https://blogs.iadb.org/puntossobrelai/2015/08/21/co-creacion-crowdsourcing-hackaton-e-innovacion-abierta-mas-que-una-moda/>
- Ramirez Gómez, C. J., & Rodríguez Espinosa, H. (2017). INFLUENCIA DE LOS RECURSOS Y LAS DINÁMICAS DEL TERRITORIO EN EL SOSTENIMIENTO DE LA AGROINDUSTRIA RURAL PANELERA DE SUPÍA, CALDAS. *Luna Azul*, 188-210.
- Revista Dinero. (19 de 11 de 2015). Obtenido de Alemania le sigue siendo fiel al café latinoamericano: <https://www.dinero.com/economia/articulo/alemania-importa-cafe-latinoamerica/216194>
- Ropero Beltran , S. (2013). Globalización, Transferencia y Adopción de Tecnológica -. *Perspectivas Rurales*, 77.

Superintendencia de Industria y Comercio. (2012). *Estudio sobre el sector del café en Colombia*.

Velásquez , H. I., Janna , F., & Agudelo , A. F. (2006). Diagnóstico exergético de los procesos productivos de la panela en Colombia. *Revista Energética*, 15-22.

Vélez Vallejo, R. (2017). Avancemos en la estrategia por la rentabilidad del Caficultor. Manizales: Congreso Nacional de Cafeteros.