Paper title: Integration Between ERP Software and Business Intelligence in Odoo ERP: Case Study A Distribution Company

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Introduction:
'Open Source Software is freely available software with its source code. Anyone can edit, modify and redistribute to anyone for any purpose with free license. It does not have a license of ownership.' (Dinesh & Vetrivel, 2015). Odoo is a functional, open source, low-cost software option with built-in integration between (ERP) Enterprise resource planning and (BI) Business Intelligence. This paper is a study of this integration and uses sales data from a distribution company. (Kendengis & Santoso, 2018) as a case study.

Objective:
(Kendengis & Santoso, 2018) describe BI as transforming raw data into meaningful information. Historically this data was retrieved from several sources and consolidated into spreadsheets. Recently ERP systems integrated with BI functionality so the retrieval of data is directly from a central database allowing historical, period selection and current enquiries. This data analysis is requested by decision makers and used as information to assist in performing business decisions. The authors attempt to prove this BI functionality using Odoo ERP with integrated BI.

The Relevance of Research:
(Agostino, Solberg Søilen, & Gerritsen, 2013) describe the necessity for (SME) Small, medium enterprises, defined as having 500 or less employees among other classifications, to have access to reasonably priced BI tools. Therefore this research is very important in assisting to provide this business sector with necessary and affordable tools in BI.

Review of Literature:
The meaning of Open Source, BI and ERP systems, is clearly defined and applied to the Odoo System. There is a historical explanation of the origins and current representation of the Odoo architecture and platform in detail. (Kendengis & Santoso, 2018).

Methodology:
A single distributed company is used as a case study in the research. Reporting is extracted from each module as different types of charts. There is an inbuilt data filter and export to excel. While selecting individual fields, there is the ability to save these selections to a favourite list for easy reproduction of the same report. Sample reports were successfully produced by the authors in their case study. (Kendengis & Santoso, 2018).

Findings:
Every module has reporting tools that Odoo presents as BI functionality. However, when the authors describe what Odoo has available, they identify BI as a separate module. (Kendengis & Santoso, 2018). Searching through the Odoo website, there is no separate BI module (Odoo, 2019).

(Kendengis & Santoso, 2018) believe Odoo is successful in assisting SME's with decision making using reports, data analysis and providing companies with improved efficiency and effectiveness of decision. This contradicts a previous point in the paper where the authors express the need for additional software to produce adequate BI analysis using Odoo. This needs further explanation.

In the abstract of this paper, (Kendengis & Santoso, 2018) suggest that Odoo has a price advantage at no cost to the customer, however, the no-cost option is limited in functionality. Based on the price list in the Odoo website (Odoo, 2019), any of the purchased options provides complete functionality at a low cost.

Conclusion:
The reader is left confused as to whether the solution proposed met the research objective due to the contradiction above. Completing this research with:
(1) Multiple case studies, (2) Proof of business analytics using (Odoo ERP+BI) and
(3) The use of Mobile and Web technology in (Odoo ERP+BI) would assist in providing this business sector with much-needed proof of affordable tools in a

difficult world economic climate as detailed by (Antoniadis, Tsiakiris, & Tsopogloy, 2015).

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