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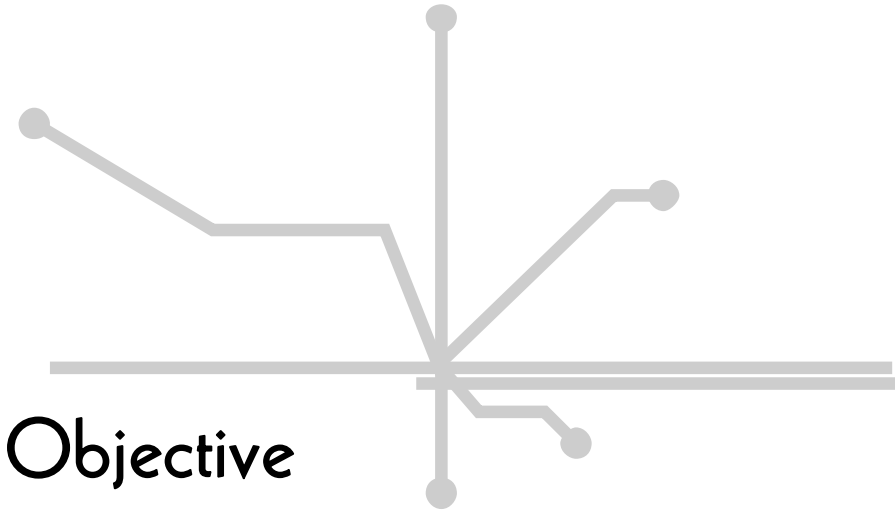
# Vertical Integration and the Commercial Printing Industry

Presentation at the IX World Media Economics and Management Conference, Bogotá, Colombia



KTH Computer Science  
and Communication





## Research Objective

*The aim of this study is to investigate the degree of vertical integration in the Swedish commercial printing industry.*

*This study will further investigate potential differences between printing firms using digital printing and those using only conventional printing with respect to vertical integration aspects.*



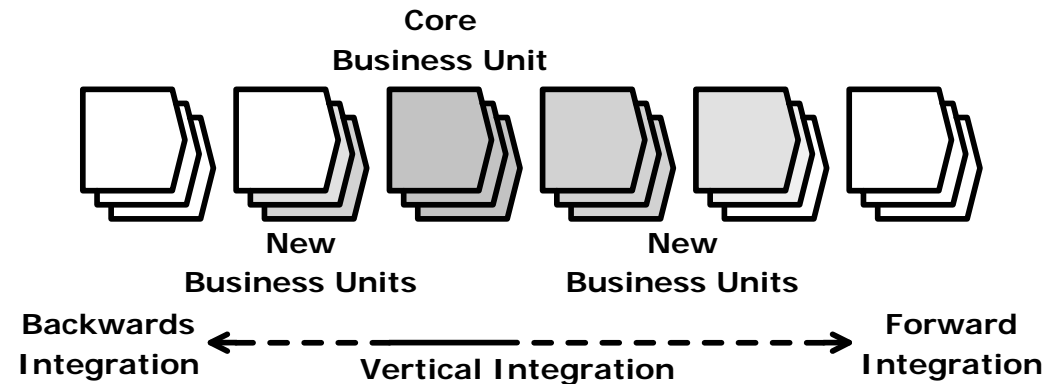
# Background

- Our previous studies have shown that integrating vertically is important to create essential competitive advantages for the digital printing industry
- In this study we wanted to investigate how common vertical integration is and whether digital printing firms have a tendency to be more integrated than conventional printing firms



# Theoretical Framework

- Industry value system  
(e.g. Porter, 1985)
- Transaction costs  
(e.g. Coase, 1937; Williamsson, 1971; 1975)
- Vertical integration  
(e.g. Adelman, 1949; Harrigan, 1983; Perry, 1989)

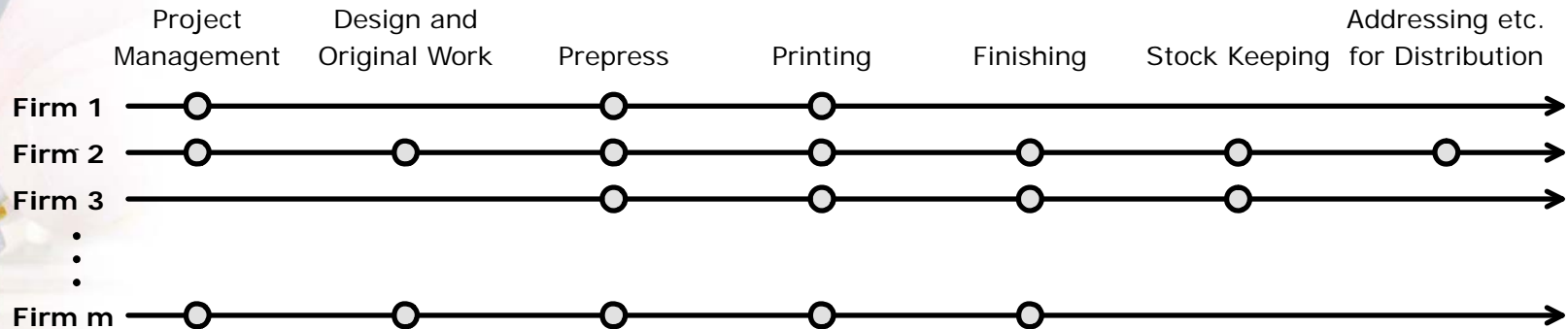


# Methodology

- Survey study of Swedish commercial printing firms
  - » Cooperation with the Swedish Graphic Companies' Federation (GFF)
  - » Random selection of respondents
  - » Response by postal mail or web interface
  - » 136 responding companies (response rate: 54%)
- Analysis of two categories
  - » Digital printers (39%)
  - » Only Conventional Printers (61%)



# Methodology



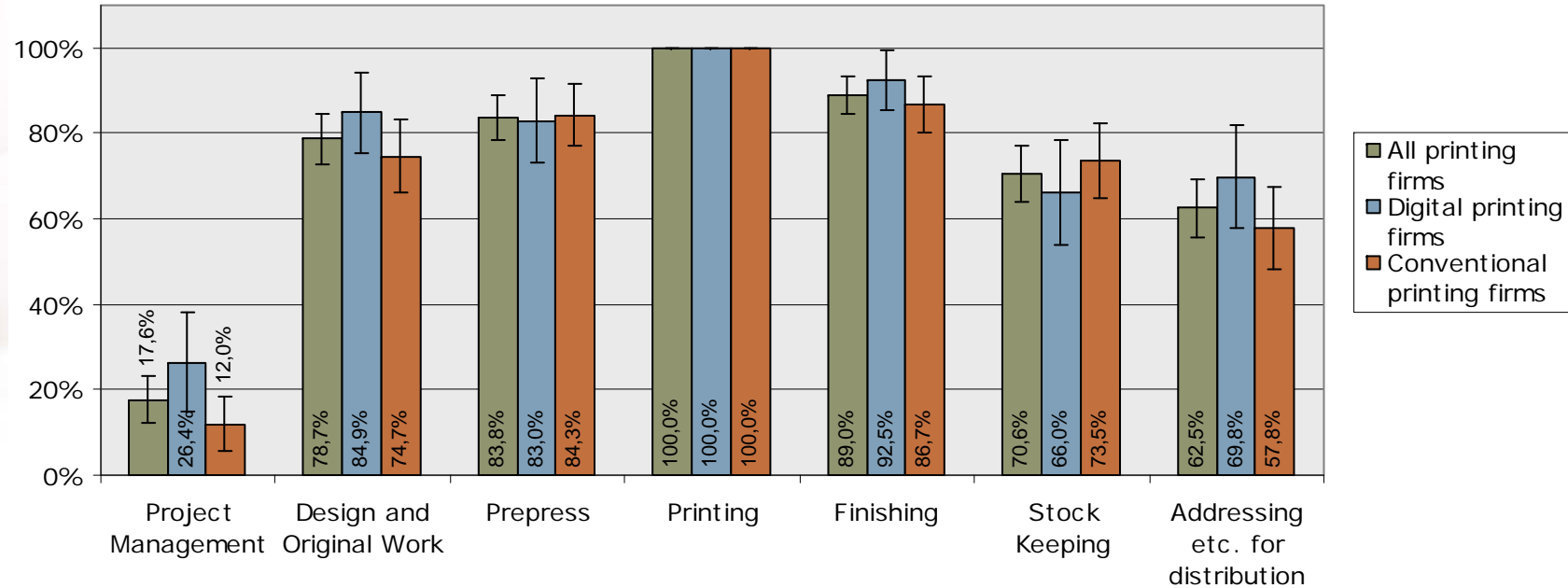
$$Vertical\ Integration\ Level\ (VIL) = \frac{\sum_{i=1}^n (Activity_i)}{n}$$

$$Activity_i = \begin{cases} 1, & \text{Activity integrated} \\ 0, & \text{Activity not integrated} \end{cases}$$



# Results

# Vertical Integration



|                                 | Proj. Man. | Design etc. | Prepress | Finishing | Stock Keeping | Addressing etc. |
|---------------------------------|------------|-------------|----------|-----------|---------------|-----------------|
| <b>Mean difference:</b>         | 0.144      | 0.102       | -0.013   | 0.057     | -0.075        | 0.120           |
| <b>t:</b>                       | 1.397      | 0.952       | -0.129   | 0.608     | -0.656        | 1.025           |
| <b>Degrees of freedom:</b>      | 134        | 134         | 134      | 134       | 134           | 134             |
| <b>Significance (2-tailed):</b> | .165       | .343        | .898     | 0.544     | 0.513         | .307            |

No significant differences between means at a 95% confidence level.



# Level of Integration

|                      | All printing firms |          |         | Digital printing firms |          |         | Conventional printing firms |          |         |
|----------------------|--------------------|----------|---------|------------------------|----------|---------|-----------------------------|----------|---------|
|                      | Total              | Backward | Forward | Total                  | Backward | Forward | Total                       | Backward | Forward |
| <b>Mean value:</b>   | 0.670              | 0.600    | 0.740   | 0.704                  | 0.648    | 0.761   | 0.649                       | 0.570    | 0.727   |
| <b>Std. dev.:</b>    | 0.192              | 0.209    | 0.259   | 0.218                  | 0.241    | 0.290   | 0.207                       | 0.222    | 0.285   |
| <b>95% CI:</b>       | 0.032              | 0.035    | 0.044   | 0.060                  | 0.066    | 0.080   | 0.045                       | 0.048    | 0.062   |
| <b>No. of resp.:</b> | 136                | 136      | 136     | 53                     | 53       | 53      | 83                          | 83       | 83      |

|                                 | Total integration | Backward integration | Forward integration |
|---------------------------------|-------------------|----------------------|---------------------|
| <b>Mean difference:</b>         | 0.056             | 0.078                | 0.034               |
| <b>t:</b>                       | 0.691             | 0.921                | 0.362               |
| <b>Degrees of freedom:</b>      | 134               | 134                  | 134                 |
| <b>Significance (2-tailed):</b> | .491              | .359                 | .718                |

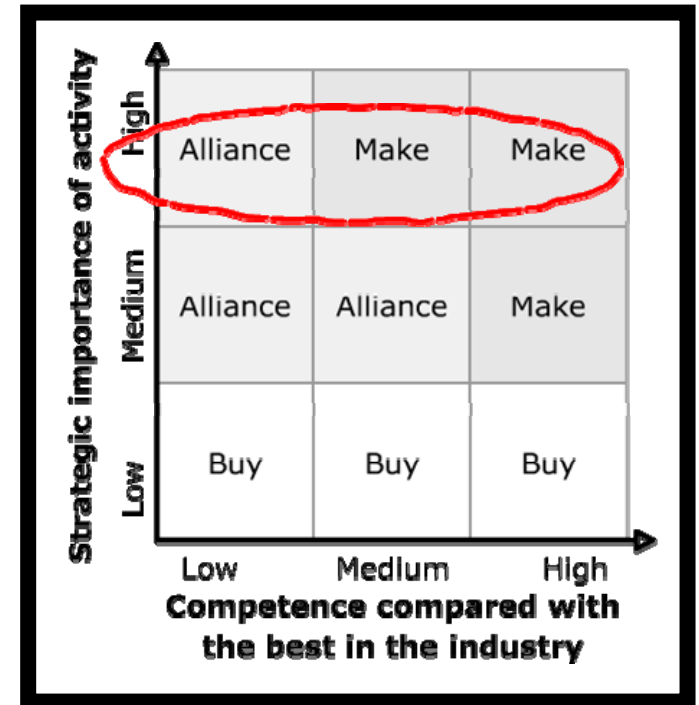
No significant difference between means at a 95% confidence level.



**Reflections**

# Reflections

- A high overall integration of complementary services in the printing industry can be noticed
- These integrated services constitute approximately 25% of the revenues
- No significant difference between digital and conventional printing firms can be detected



# Reflections

- Vertical integration increases the possibility for a differentiation strategy (e.g. Porter, 1985). However, lack of difference in integration may explain the tough competition and the problems in the struggling digital printing business



# Acknowledgement

- *Grafiska Företagens Stipendiestiftelse*
- *Swedish Graphic Companies' Federation (GFF)*
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- *Kempe Foundations* and the *EU Structural Fund*





Thank You for Your Attention!

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