## biagio

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## Graphical analysis of the definitions

```
## Rows: 680
## Columns: 22
                                                   <chr> "MB-061/01", "MB-061/02",~
## $ id
## $ authors
                                                   <chr> "Battleson D.A., West B.C~
## $ title
                                                   <chr> "Achieving dynamic capabi~
                                                   <dbl> 2016, 2016, 2014, 2014, 2~
## $ year
## $ source_title
                                                   <chr> "European Journal of Info~
## $ field
                                                   <chr> "INFO MAN", "INFO MAN", "~
## $ abstract
                                                   <chr> "Cloud computing enables ~
## $ keywords
                                                   <chr> "cloud computing; dynamic~
## $ explicit_definition_y_n
                                                   <chr> "Y", "N", "Y", "Y", "Y", ~
## $ construct name
                                                   <chr> "Dynamic capability", "IT~
                                                   <chr> "'Dynamic' refers to the ~
## $ construct definition
## $ comments
                                                   <chr> NA, NA, NA, NA, NA, NA, N~
## $ repeatable_patterns_of_organizational_action <chr> "Yes", "Excluded", "Yes",~
                                                   <chr> "No", "Excluded", "No", "~
## $ specific_it_domain
                                                   <chr> "No", "Excluded", "No", "~
## $ it assets required
                                                   <chr> "No", "Excluded", "No", "~
## $ module
                                                   <chr> "No", "Excluded", "No", "~
## $ encapsulated
## $ type_of_construct
                                                   <chr> "Organizational capabilit~
## $ notes
                                                   <chr> NA, NA, NA, NA, NA, NA, N~
## $ check
                                                   <dbl> 1, 0, 1, 0, 1, 1, 0, 1, 1~
## $ priority
                                                   <dbl> 2, 2, 2, 2, 2, 2, 2, 2, 2~
## $ article_number
                                                   <chr> "MB-061", "MB-061", "MB-0~
```

## Construct name and definition preprocessing

## Bigram analysis on construct name

```
## # A tibble: 610 x 2
##
     bigram
                                               n
##
      <chr>
                                           <int>
  1 informationtechnology capability
                                             109
  2 informationtechnology enabled
                                              27
##
   3 informationtechnology infrastructure
                                              20
  4 management capability
                                              18
## 5 informationtechnology resources
                                              14
## 6 informationsystems capability
                                              11
## 7 informationtechnology competence
                                              11
```

```
8 absorptive capacity
                                                 10
                                                 10
  9 dynamic capability
## 10 digital capability
                                                  9
## # ... with 600 more rows
                                           external
                                        firm
                   stance
  supply
                                                                  capacity
                                        relationship
                                                digitized
chain
                                       change
                                                          absorptive
                      proactive
                                  knowledge
                                                        interfirm
                                                                                    market
                        interorganizational
                                                  process digitally
                                      dependent
                         supplier
                                                                                 responsiven
                                     management
                                                  information
                                        strategic
                competency
                                                                  systems
                      informationtechnolog
           enhanced
                                          technology
                                                         social
              structural
                                resources
                                                   processing
              intensity
                          governance
                                           Winformationsystems
                              business capability
                                                              operations
                                                                              product
                                      technical
                                                   reputation integrated
               partnerships digital
                                                             project
                                                application
                             platform
                              innovation
               options
                                                    analytic
                                     technological
                orientation
                   technologies
                                                             data
```

In this section I perform a bigram analysis to explore the relationships between words in the construct name.

```
## # A tibble: 977 x 26
##
      iд
                authors
                          title year sourc~1 field abstr~2 keywo~3 expli~4 const~5
##
                <chr>
                          <chr> <dbl> <chr>
                                               <chr> <chr>
                                                             <chr>
                                                                     <chr>>
                                                                              <chr>
##
   1 MB-061/01 Battleso~ Achi~
                                 2016 Europe~ INFO~ Cloud ~ cloud ~ Y
                                                                              Dynami~
   2 MB-061/02 Battleso~ Achi~
                                 2016 Europe~ INFO~ Cloud ~ cloud ~ N
                                                                              IT cap~
   3 MB-061/02 Battleso~ Achi~
                                 2016 Europe~ INFO~ Cloud ~ cloud ~ N
##
                                                                              IT cap~
   4 MB-062/01 Huang P.~ Deve~
                                 2014 Europe~ INFO~ The op~ case s~ Y
##
                                                                              Inform~
   5 MB-062/01 Huang P.~ Deve~
                                 2014 Europe~ INFO~ The op~ case s~ Y
##
                                                                              Inform~
                                 2014 Europe~ INFO~ The op~ case s~ Y
   6 MB-062/02 Huang P.~ Deve~
                                                                              Inform~
   7 MB-063/01 Li T., V~ Info~
                                 2009 Europe~ INFO~ Using ~ Inform~ Y
                                                                              Inform~
##
##
   8 MB-065/01 Chan C.M~ Mana~
                                 2011 Europe~ INFO~ The re~ case s~ N
                                                                              Focal ~
   9 MB-068/01 Mikalef ~ IT a~
                                 2021 Europe~ INFO~ A ques~ compet~ Y
                                                                              IT-ena~
## 10 MB-068/01 Mikalef ~ IT a~
                                 2021 Europe~ INFO~ A ques~ compet~ Y
                                                                              IT-ena~
## # ... with 967 more rows, 16 more variables: construct definition <chr>,
## #
       comments <chr>, repeatable_patterns_of_organizational_action <chr>,
## #
       specific_it_domain <chr>, it_assets_required <chr>, module <chr>,
## #
       encapsulated <chr>, type_of_construct <chr>, notes <chr>, check <dbl>,
       priority <dbl>, article_number <chr>, discipline <chr>, construct <ord>,
## #
       construct_def_clean <chr>, bigram <chr>, and abbreviated variable names
##
       1: source title, 2: abstract, 3: keywords, 4: explicit definition y n, ...
## # A tibble: 492 x 3
```

```
##
      word1
                             word2
                                                 n
##
      <chr>
                             <chr>>
                                             <int>
##
    1 informationtechnology capability
                                               109
    2 informationtechnology enabled
                                                27
##
    3 informationtechnology infrastructure
                                                20
    4 management
                                                18
##
                             capability
    5 informationtechnology resources
##
                                                14
    6 informationsystems
##
                             capability
                                                11
    7 informationtechnology competence
##
                                                11
                                                10
##
    8 absorptive
                             capacity
    9 dynamic
                             capability
                                                10
## 10 digital
                             capability
                                                 9
   # ... with 482 more rows
   IGRAPH 96f4fbf DN-- 88 131 --
   + attr: name (v/c), n (e/n)
## + edges from 96f4fbf (vertex names):
    [1] informationtechnology->capability
                                                informationtechnology->enabled
    [3] informationtechnology->infrastructure management
                                                                      ->capability
    [5] informationtechnology->resources
                                                informationsystems
                                                                      ->capability
##
    [7] informationtechnology->competence
                                                absorptive
                                                                      ->capacity
    [9] dynamic
                              ->capability
                                                digital
                                                                      ->capability
##
## [11] informationtechnology->governance
                                                informationtechnology->management
## [13] information
                              ->processing
                                                informationtechnology->business
## [15] informationtechnology->leveraging
                                                innovation
                                                                      ->capability
## + ... omitted several edges
                                                external
               chain
                                                relationship
                            stance
           supply
                                                              systems
                                                 change
                                                                  cost
                               proactive
                                                   information
                                                                   planning
                                    human dependent
                                                management
                                                                        project
                                                                                      product
                           based
                                      managerial
                                                           processing integrated
                           supplier
                                                skills
                           structural
                                                       informationsystems
ponsiveness
                                                        technical
                                 informationtechnology
                                                  levéraging
                          affordance
market
                                                                    commerce
                                            governance
                            ambidexterity
                                                                  application
                                                infrastructure
                                           dynamic
                                                                                      data
                                                                  ordinary
                         knowledge
                                                                   technological
                                              business
                  firm
                                                         innovation service
                                    enabled
                                                              informational
                                                     digital
                            digitized
                                       process
                                                       social
                      absorptive
                                   interfirm
                                digitally
                                                         orientation
                 capacity
                                                  options
```