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It's The Economy, Stupid!

Eventually leading into the great recession that still shapes our economy today, the 2007-2008 financial crisis was *the* macroeconomic event of the first decade of the 21st century. For this first assignment, I am looking at possible effects of this historic bust on the choice of books borrowed by the patrons of the Seattle public library system. Specifically, I am asking if there is a visible increase in interest in understanding the mechanisms of capitalism around the peak of the crisis.

Fortunately, the Dewey Decimal System in place at the library makes it easy to confine a query to a specific subject area, here 330-339: Economy. Limiting the timespan in question to the years 2006-2012 as well, I started out with a very simple query:

```
SELECT
      YEAR(cout),
      MONT(cout),
      SUM(CASE
            WHEN deweyClass >=330 AND deweyClass < 340 THEN 1
            ELSE 0
      END) AS isEcon
FROM
      spl2.inraw
WHERE
      DATE(cout) > '2006-1-1' AND DATE(cout) < '2013-12-31'
GROUP BY YEAR(cout),MONTH(cout)
```

[TIME: 150.778 sec.]

The results seemed to show some potential for further analysis, so in a second step, I narrowed down the query to specific keywords. I chose the keywords "capital" and "understand" to represent the assumed increase in interest in understanding the mechanisms of capitalism. The added lines are:

```
SUM(CASE
      WHEN deweyClass >= 330 AND deweyClass < 340
      AND (title LIKE '%capital%' OR title LIKE '%understand%')
      THEN 1
      ELSE 0
END) AS isEconAndHasKeywords
```

However, the results are meaningless unless we look at the percentage of titles including the keywords *within* the body of borrowed Dewey 330-339 books. Hence, the final query is:

```
SELECT
    YEAR(cout),
    MONTH(cout),

    SUM(CASE
        WHEN deweyClass >= 330 AND deweyClass < 340 THEN 1
        ELSE 0
    END) AS isEcon,
```

```
    SUM(CASE
        WHEN deweyClass >= 330 AND deweyClass < 340
            AND (title LIKE '%capital%' OR title LIKE '%understand%')
        THEN 1
        ELSE 0
    END) AS isEconAndHasKeywords,

    (SUM(CASE
        WHEN deweyClass >= 330 AND deweyClass < 340
            AND (title LIKE '%capital%' OR title LIKE '%understand%')
        THEN 1
        ELSE 0
    END) / SUM(CASE
        WHEN deweyClass >= 330 AND deweyClass < 340 THEN 1
        ELSE 0
    END)) AS twoOverOne

FROM
    spl2.inraw
WHERE
    DATE(cout) > '2006-1-1' AND DATE(cout) < '2012-12-31'
GROUP BY YEAR(cout) , MONTH(cout)
```

[TIME: 261.789 sec.]

The results seem to suggest that there is, indeed, an increased interest in understanding the mechanisms of capitalism around the peak of the crisis. What is even more interesting though is the percentage of titles including the keywords: It increases but does not decrease proportionally with the total number of economy related titles borrowed.

One could assume that, while the general interest in economical questions peaked with the crisis, the specific interest in understanding the mechanisms of capitalism - maybe connected to the lasting effects of the crisis - increased permanently. Nevertheless, there is another, more pragmatic explanation: As a response to the crisis, the library simply added a lot of titles containing the keywords to the collection thus making the likelihood of borrowing a title containing the keywords a bit higher.

Unfortunately, I was unable to verify this hypothesis by querying the database again as the `itemNumber` **field can be correlated to the position of a title in the sequence of acquisitions but not to a specific date of acquisition.**